ONKYO

BLU-RAY DISC™ PLAYER

BD-SP809

Instruction Manual

Thank you for purchasing an Onkyo BLU-RAY DISC™ PLAYER. Please read this manual thoroughly before making connections and plugging in the unit. Following the instructions in this manual will enable you to obtain optimum performance and listening enjoyment from your new BLU-RAY DISC™ PLAYER. Please retain this manual for future reference.

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En

WARNING:
TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPARATUS TO RAIN OR MOISTURE.

CAUTION:
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

The important note and rating are located on the rear or bottom of the cabinet.

The symbol for CLASS ll (Double Insulation)

Important Safety Instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. Damage Requiring Service
    Unplug the apparatus from the wall outlet and refer servicing to qualified service personnel under the following conditions:
    A. When the power-supply cord or plug is damaged,
    B. If liquid has been spilled, or objects have fallen into the apparatus,
    C. If the apparatus has been exposed to rain or water,
    D. If the apparatus does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the apparatus to its normal operation,
    E. If the apparatus has been dropped or damaged in any way, and
    F. When the apparatus exhibits a distinct change in performance this indicates a need for service.
16. Object and Liquid Entry
    Never push objects of any kind into the apparatus through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock.
    WARNING: The apparatus shall not be exposed to dripping or splashing and no objects filled with liquids, such as vases shall be placed on the apparatus. Don't put candles or other burning objects on top of this unit.
17. Batteries
    Always consider the environmental issues and follow local regulations when disposing of batteries.
18. If you install the apparatus in a built-in installation, such as a bookcase or rack, ensure that there is adequate ventilation.
    Leave 20 cm (8") of free space at the top and sides and 10 cm (4") at the rear. The rear edge of the shelf or board above the apparatus shall be set 10 cm (4") away from the rear panel or wall, creating a flue-like gap for warm air to escape.
19. Slots and openings in the cabinet at the sides and underneath are provided for ventilation. To ensure reliable operation and to protect the unit from overheating, these openings must not be blocked or covered.
    Avoid installation in enclosed spaces such as bookcases unless suitable ventilation is provided.

Precautions

1. **Recording Copyright**—Unless it's for personal use only, recording copyrighted material is illegal without the permission of the copyright holder.
2. **AC Fuse**—The AC fuse inside the unit is not user-serviceable. If you cannot turn on the unit, contact your Onkyo dealer.
3. **Care**—Occasionally you should dust the unit all over with a soft cloth. For stubborn stains, use a soft cloth dampened with a weak solution of mild detergent and water. Dry the unit immediately afterwards with a clean cloth. Don't use abrasive cloths, thinners, alcohol, or other chemical solvents, because they may damage the finish or remove the panel lettering.
4. **Power**
   WARNING
   BEFORE PLUGGING IN THE UNIT FOR THE FIRST TIME, READ THE FOLLOWING SECTION CAREFULLY.
   AC outlet voltages vary from country to country. Make sure that the voltage in your area meets the voltage requirements printed on the unit's rear panel (e.g., AC 110-240 V, 50/60 Hz or AC 120 V, 60 Hz).

   The power cord plug is used to disconnect this unit from the AC power source. Make sure that the plug is readily operable (easily accessible) at all times.

   Pressing the **[ON/STANDBY]** button to select Standby mode does not fully disconnect from the mains. If you do not intend to use the unit for an extended period, remove the power cord from the AC outlet.
5. **Preventing Hearing Loss**
   Caution
   Excessive sound pressure from earphones and headphones can cause hearing loss.
6. **Batteries and Heat Exposure**
   Warning
   - Batteries (battery pack or batteries installed) shall not be exposed to excessive heat as sunshine, fire or the like.
   - Do not recharge, short-circuit, heat, burn or disassemble batteries.
7. **Never Touch this Unit with Wet Hands**—Never handle this unit or its power cord while your hands are wet or damp. If water or any other liquid gets inside this unit, have it checked by your Onkyo dealer.
8. **Handling Notes**
   - If you need to transport this unit, use the original packaging to pack it how it was when you originally bought it.
   - Do not leave rubber or plastic items on this unit for a long time, because they may leave marks on the case.
   - This unit's top and rear panels may get warm after prolonged use. This is normal.
   - If you do not use this unit for a long time, it may not work properly the next time you turn it on, so be sure to use it occasionally.
   - When you've finished using this unit, remove all discs and turn off the power.
9. **Installing this Unit**
   - Install this unit in a well-ventilated location.
   - Ensure that there's adequate ventilation all around this unit, especially if it's installed in an audio rack. If the ventilation is inadequate, the unit may overheat, leading to malfunction.
   - Do not expose this unit to direct sunlight or heat sources, because its internal temperature may rise, shortening the life of the optical pickup.
   - Avoid damp and dusty places, and places subject to vibrations from loudspeakers.
   - Never put the unit on top of, or directly above a loudspeaker.
   - Install this unit horizontally. Never use it on its side or on a sloping surface, because it may cause a malfunction.
   - If you install this unit near a TV, radio, or VCR, the picture and sound quality may be affected. If this occurs, move this unit away from the TV, radio, or VCR.
10. **To Obtain a Clear Picture**—This unit is a high-tech, precision device. If the lens on the optical pickup, or the disc drive mechanism becomes dirty or worn, the picture quality may be affected. To maintain the best picture quality, we recommend regular inspection and maintenance (cleaning or worn part replacement) every 1,000 hours of use depending on the operating environment. Contact your Onkyo dealer for details.
11. **Moisture Condensation**
    Moisture condensation may damage this unit.
    Read the following carefully:
    Moisture may condense on the lens of the optical pickup, one of the most important parts inside this unit.
    - Moisture condensation can occur in the following situations:
      – The unit is moved from a cold place to a warm place.
      – A heater is turned on, or cold air from an air conditioner is hitting the unit.
      – In the summer, when this unit is moved from an air conditioned room to a hot and humid place.
      – The unit is used in a humid place.
    - Do not use this unit when there's the possibility of moisture condensation occurring. Doing so may damage your discs and certain parts inside this unit.

    If condensation does occur, unplug the power cord and leave the unit for two to three hours in the room temperature.

12. **Region Codes**—The Blu-ray Disc™/DVD standard uses region codes to control how discs can be played around the world, the world being divided into three regions (Blu-ray Disc™) or six regions (DVD). This unit will only play Blu-ray Disc™/DVD discs that match its region code, which can be found on its rear panel.
13. **About this Manual**—This manual explains how to use all of this unit's functions. Although the Blu-ray Disc™/DVD standard offers many special features, not all discs use them all, so depending on the disc being played, this unit may not respond to certain functions. See the disc's sleeve notes for supported features.

Never use a gas duster on this unit.
The gas trapped inside of this unit may cause ignition and explosion.

This unit contains a semiconductor laser system and is classified as a "CLASS 1 LASER PRODUCT". So, to use this model properly, read this Instruction Manual carefully. In case of any trouble, please contact the store where you purchased the unit.
To prevent being exposed to the laser beam, do not try to open the enclosure.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: CLASS 2 LASER RADIATION WHEN OPEN, DO NOT STARE INTO THE BEAM.

LOCATION: INSIDE, NEAR THE DECK MECHANISM.

The label on the right is applied on the rear panel.

1. This unit is a CLASS 1 LASER PRODUCT and employs a laser inside the cabinet.
2. To prevent the laser from being exposed, do not remove the cover. Refer servicing to qualified personnel.

For British models

Replacement and mounting of an AC plug on the power supply cord of this unit should be performed only by qualified service personnel.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

Blue: Neutral
Brown: Live

As the colours of the wires in the mains lead of this apparatus may not correspond with the coloured markings identifying the terminals in your plug, proceed as follows:
The wire which is coloured blue must be connected to the terminal which is marked with the letter N or coloured black.
The wire which is coloured brown must be connected to the terminal which is marked with the letter L or coloured red.

IMPORTANT

The plug is fitted with an appropriate fuse. If the fuse needs to be replaced, the replacement fuse must approved by ASTA or BSI to BS1362 and have the same ampere rating as that indicated on the plug. Check for the ASTA mark or the BSI mark on the body of the fuse.
If the power cord's plug is not suitable for your socket outlets, cut it off and fit a suitable plug. Fit a suitable fuse in the plug.

For European Models

Declaration of Conformity

We declare, under our sole responsibility, that this product complies with the standards:

– Safety
– Limits and methods of measurement of radio disturbance characteristics
– Limits for harmonic current emissions
– Limitation of voltage changes, voltage fluctuations and flicker
– RoHS Directive, 2011/65/EU

WEEE

http://www.onkyo.com/manual/weee/weee.pdf

1. SUPPLIED ACCESSORIES

- Remote Control
- Batteries (R6, 1.5V × 2)
- AC cord
- Instruction Manual (CD-ROM)
- Quick Start Guide
- Safety Information

■ Note about Recycling

- This unit's packaging materials are recyclable and can be reused. Please dispose of any materials in accordance with your local recycling regulations.
- Batteries should never be thrown away or incinerated but disposed of in accordance with your local regulations concerning chemical wastes.

■ Maintenance

Servicing

- Please refer to relevant topics on "TROUBLESHOOTING" on page 48 before returning the product.
- If this unit becomes inoperative, do not try to correct the problem by yourself. There are no user-serviceable parts inside. Turn the unit to the standby mode, unplug the power plug, and contact your Onkyo dealer.

Disc handling

- For best results, keep your discs clean. Fingerprints and dust can affect the sound and picture quality and should be removed as follows. Using a clean, soft cloth, wipe from the centre outwards, as shown. Never wipe in a circular direction.
- To remove stubborn dust or dirt, wipe the disc with a damp, soft cloth, and then dry it with a dry cloth.
- Never use solvent-based cleaning fluids, such as thinner or benzine, commercially available cleaners, or antistatic sprays intended for vinyl records, because they may damage the disc.

IR signal check

- If the remote control is not working properly, you can use a digital camera (including a cellular phone with built-in camera) to see if it is sending out an infrared signal.
  With a digital camera (including built-in cell phone cameras): Point a digital camera towards the remote control. Push any button on the remote control and look through the digital camera. If the infrared light appears through the camera, the remote control is working.

Copyright

- It is forbidden by law to copy, broadcast, show, broadcast on cable, play in public, or rent copyrighted material without permission. Commercial BD-video/ DVD-video discs are copy-protected, and any recordings made from these discs will be distorted. This item incorporates copy protection technology that is protected by U.S. patents and other intellectual property rights of Rovi Corporation. Reverse engineering and disassembly are prohibited.

Note about AC cord

- Use only the supplied AC cord.
- Do not use the supplied AC cord to other units.

2. TRADEMARK INFORMATION

Manufactured under license from Dolby Laboratories. “Dolby” and the double-D symbol are trademarks of Dolby Laboratories.

Manufactured under license under U.S. Patent #’s: 5,451,942; 5,956,674; 5,974,380; 5,978,762; 6,226,616; 6,487,535; 7,392,195; 7,272,567; 7,333,929; 7,212,872 & other U.S. and worldwide patents issued & pending. DTS and the Symbol are registered trademarks, & DTS-HD, DTS-HD Master Audio | Essential and the DTS logos are trademarks of DTS, Inc. Product includes software. © DTS, Inc. All Rights Reserved.

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is a trademark of DVD Format/Logo Licensing Corporation.

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3. FEATURES

3.1 Features

Blu-ray Disc™

You can enjoy Blu-ray Disc™ which is capable of storing five times more data than a conventional DVD.

Playing back Blu-ray 3D™ Disc

This unit can play back Blu-ray 3D™ discs which contain stereoscopic 3D video. In order to enjoy 3D video, connect this unit to a 3D capable TV using a 3D compatible HDMI cable.

BD-Java

With some Blu-ray™ discs which support Java applications, you can enjoy the interactive functions such as games or interactive menus.

DVD upscaling for enhanced picture quality

Your current DVD will look even better than before thanks to video upscaling. Upscaling will increase the resolution of standard definition DVD to high definition up to 1080p over an HDMI connection. The picture will be less jagged and more realistic for a near high definition experience.

Enjoy your content on different kinds of media

Full backwards compatibility with DVD, CD and USB flash drive ensures that you can continue to enjoy your current audio-video collection. Additionally, you can enjoy AVCHD / MP3 / WMA / JPEG files.

Listen to rich multi-channel surround sound

Multi-channel surround sound, which realises real-to-life sound and makes you feel that you are really there.

Easy and simple connection to your HDTV via HDMI

Connect this unit to your HDTV with one single HDMI (High-Definition Multimedia Interface) cable. It is recommended to use a High Speed HDMI cable for better compatibility. The high definition video output signal will be transferred to your HDTV without conversion to analogue signals, so you will get excellent picture and sound quality, completely free from noise. Thanks to other multiple outputs, you can also easily connect to your home theatre system or amplifier.

HDMI CEC (Consumer Electronics Control)

This unit supports HDMI CEC, which allows integrated system control over HDMI and is part of the HDMI standard. This function may not work properly on some devices.

PiP (BONUSVIEW™)

Some BD-videos have the PiP function which enables you to display the secondary video in the primary video. You can call up the secondary video by pressing **[PIP]** whenever the scene contains the secondary video.

BD-Live™

BD-Live™ (BD-ROM version 2 Profile 2.0) that allows interactive functions to be used when this unit is connected to the Internet in addition to the BONUSVIEW™ function. The various functions differ depending on the disc.

Pop-up menu

Some BD-videos have a pop-up menu which is a navigation menu that can be called up and be operated on the TV screen without interrupting playback. You can call up the pop-up menu by pressing **[POP UP MENU / MENU]**. Contents in the pop-up menu vary depending on the disc.

HDMI Deep Color

Deep Color reduces posterization (colour banding) effect of the playback image.

HDMI 1080p/24 output (Blu-ray Disc™ only)

This unit is equipped with the feature which can provide smooth movement during playback of film originated material with the frame rate of 24 frames per second with progressive. (Available only when the display device is connected by an HDMI cable.) Refer to “Video Resolution” on page 43.

Playing back contents from a USB flash drive

You can play back MP3 / WMA / JPEG files stored in a USB flash drive. BD-ROM Profile 2.0 (BD-Live™) and Profile 1.1 discs sometimes store picture-in-picture commentary, subtitles or other extras in the USB flash drive for use during playback with the BD-video.

Playing back AVCHD files

This unit supports playback of AVCHD format files (new format for high definition video camcorders) recorded on disc / SD cards using USB card reader / USB hub (not supplied). Your high definition personal archive is playable in HD quality.

x.v.Color

This unit supports playback of video contents on discs recorded with "x.v.Color" technology. To watch this video content with the "x.v.Color" space, a TV or other display device supporting both video image reproduction using "x.v.Color" standard and capability of manual switching of its colour space setting is required. Please refer to the owner's manual of your display device for further information.

3.2 Symbols Used in this Manual

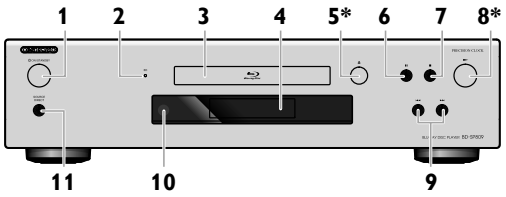
To specify which media type each function is applicable to, we put the following symbols at the beginning of each item to operate.

Symbol	Description
BD-V	Description refers to BD-video
DVD-V	Description refers to DVD-video
CD	Description refers to audio CD / DTS-CD
AVCHD	Description refers to DVD-RW/-R with AVCHD files
MP3	Description refers to BD-RE/-R, DVD-RW/-R, CD-RW/-R and USB flash drive with MP3 files
WMA	Description refers to BD-RE/-R, DVD-RW/-R, CD-RW/-R and USB flash drive with Windows Media™ Audio files
JPEG	Description refers to BD-RE/-R, DVD-RW/-R, CD-RW/-R and USB flash drive with JPEG files

If you do not find any of the symbols listed above under the function heading, the operation is applicable to all media.

4. FUNCTIONAL OVERVIEW

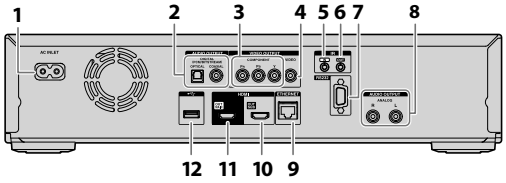
4.1 Front Panel



* The unit can also be turned on by pressing these buttons.

1. ⏻ ON/STANDBY button
2. 3D indicator
3. Disc tray
4. Display
5. ⏏ (open/close) button*
6. ⏸ (pause) button
7. ■ (stop) button
8. ▶ (play) button*
9. ⏮ / ⏭ (skip down / up) buttons
10. Infrared sensor window
11. SOURCE DIRECT button

4.2 Rear Panel

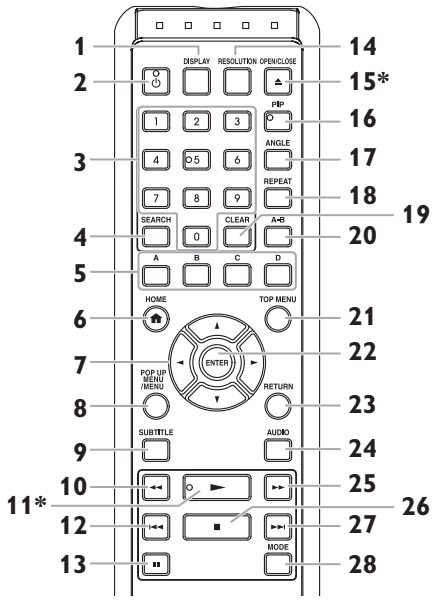


1. AC INLET terminal
2. AUDIO OUTPUT (DIGITAL OPTICAL / COAXIAL) jacks
3. VIDEO OUTPUT (COMPONENT) jacks
4. VIDEO OUTPUT (VIDEO) jack
5. IR IN jack
6. IR OUT jack
7. CONTROL CONNECTOR (RS-232)
8. AUDIO OUTPUT (ANALOG L / R) jacks
9. ETHERNET terminal
10. HDMI OUT SUB jack
11. HDMI OUT MAIN jack
12. USB input

Caution

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
- This unit does not have an RF modulator.
- Do not connect any device other than USB flash drive, USB card reader or USB hub into USB input. (e.g. PC, external HDD, MP3 player, digital camera, keyboard, mouse, etc.)

4.3 Remote Control



* The unit can also be turned on by pressing these buttons.

1. **DISPLAY button**
   - Press to display the on-screen display menu.
2. **⏻ (on/standby) button**
   - Press to turn on the unit, or to turn the unit into the standby mode. (To completely shut down the unit, you must unplug the AC power cord.)
3. **Number buttons**
   - Press to select a chapter during playback.
   - Press to enter numbers in the input field.
4. **SEARCH button**
   - Press to display the search menu.
5. **A / B / C / D buttons**
   - Press to activate shortcut keys on some BD-video functions.
   - When file list / thumbnail list is shown, press to switch between pages.
6. **HOME button**
   - Press to display the home menu.
7. **▲/▼/◄/► buttons**
   - Press to select items or settings.
8. **POP UP MENU / MENU button**
   Blu-ray Disc™:
   - Press to display the pop-up menu.

   DVD:
   - Press to display the disc menu.
9. **SUBTITLE button**
   - Press to select subtitles on a disc.
10. **◄◄ (reverse) button**
    - During playback, press to fast reverse the playback.
11. **► (play) button***
    - Press to start playback or resume playback.
12. **|◄◄ (skip) button**
    - During playback, press once to return to the beginning of the current title, chapter, track or file.
    - During playback, press twice to return to the previous title, chapter, track or file.
    - During the JPEG playback, press to return to the previous file.
13. **II (pause) button**
    - Press to pause playback.
14. **RESOLUTION button**
    - Press to set the HDMI output mode.
15. **OPEN / CLOSE ⏏ button***
    - Press to open or close the disc tray.
16. **PIP button**
    - Press to switch picture in picture feature on/off (only applicable to BD-video which supports the PiP (BONUSVIEW™) function).
17. **ANGLE button**
    - Press to access various camera angles on the disc.
18. **REPEAT button**
    - Press to select repeat modes.
19. **CLEAR button**
    - Press to clear the information once entered.
    - Press to cancel the A point which was set in A-B repeat mode.
20. **A-B button**
    - Press to play back a defined section between point A and B repeatedly.
21. **TOP MENU button**
    Blu-ray Disc™:
    - Press to display the top menu.

    DVD:
    - Press to display the title menu.
22. **ENTER button**
    - Press to confirm or select menu items.
23. **RETURN button**
    - Press to return to the previously displayed menu or screen function.
24. **AUDIO button**
    - Press to select the audio channel (such as audio languages) on a disc.
25. **►► (forward) button**
    - During playback, press to fast forward the playback.
    - In pause mode, press to slow forward the playback.

26. ■ (stop) button

- Press to stop playback.

27. ▶▶| (skip) button

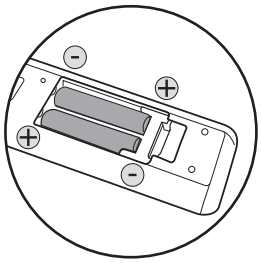
- During playback, press to skip to the next chapter, track or file.
- When playback is in pause mode, press to forward the playback picture by picture.

28. MODE button

- During playback, press to display the play menu.

■ Installing the Batteries in the Remote Control

Install 2 R6 (1.5V) batteries matching the polarity indicated inside battery compartment of the remote control.



Caution

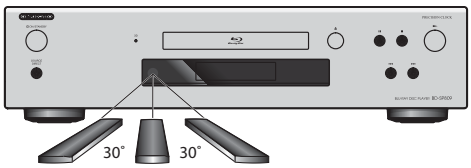
Incorrect use of batteries can result in hazards such as leakage and bursting. Please observe the following:

- Do not mix alkaline, standard (carbon-zinc), or rechargeable (ni-cad, ni-mh, etc) batteries.
- Do not mix new and old batteries together.
- Do not use different kinds of batteries together. Although they may look similar, different batteries may have different voltages.
- Make sure that the + and - ends of each battery match the indications in the battery compartment.
- Remove batteries from battery compartment, when the remote is not going to be used for a month or more.
- When disposing of used batteries, please comply with governmental regulations or environmental public rules that apply in your country or area.
- Do not recharge, short-circuit, heat, burn or disassemble batteries.

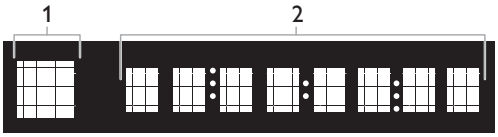
■ **Using the Remote Control**

Remote Control Usage Guidelines:

- Make sure that there are no obstacles between the remote control and the infrared sensor window on the unit.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the infrared sensor window of the unit.
- Remote controls of different devices can interfere with each other. Avoid using a remote controls of another device which is located close to the unit.
- Replace the batteries when you notice a fall-off in the operating range of the remote control.
- The maximum operable ranges from the unit are as follows.
  - **– Line of sight:**
    approx. 7 m
  - **– Either side of the centre:**
    approx. 5 m within 30°
  - **– Above:**
    approx. 5 m within 15°
  - **– Below:**
    approx. 3 m within 30°



4.4 Front Panel Display



* Brightness of the display can be adjusted. Refer to "Panel Display" in "LIST OF SETTINGS" on page 39.

1. Displays playback status icon. Refer to the table below.
2. Displays various kinds of information such as title number, elapsed time, repeat mode, etc.

Playback Status Icon	Mode
▶	Playback is in progress
■	Stop mode
❚❚	Pause mode
▶▶	Fast forward mode
◀◀	Fast reverse mode
❚▶	Slow forward mode
↻	Appears while repeat function is set

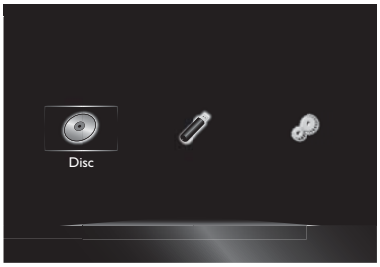
Example of Display Message

▶ 00:23	Title is being played back. Indicating the current title number and the elapsed time.
↻ CHAPTER	Current chapter is in chapter repeat mode.
LOADING	Loading a disc, USB flash drive or USB card reader.
HOME	Home menu is displayed.

4.5 Guide to On-Screen Display

■ Home Menu

When you turn on the unit, home menu will appear automatically. Otherwise, press **[HOME ⌂]**.

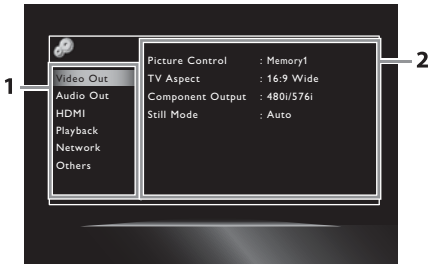


"Disc" : Initiates playback of inserted disc, displays a list of tracks / files or the media filter menu

"USB" : Displays a list of tracks / files on the connected USB flash drive or the media filter menu

"Settings" : To access the setup menu

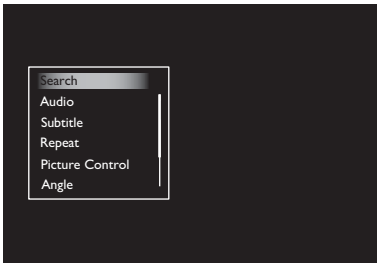
■ Setup Menu



1. **Category**
2. **Menus / Options** : Displays options for the highlighted item on the left whenever available.

■ Play Menu

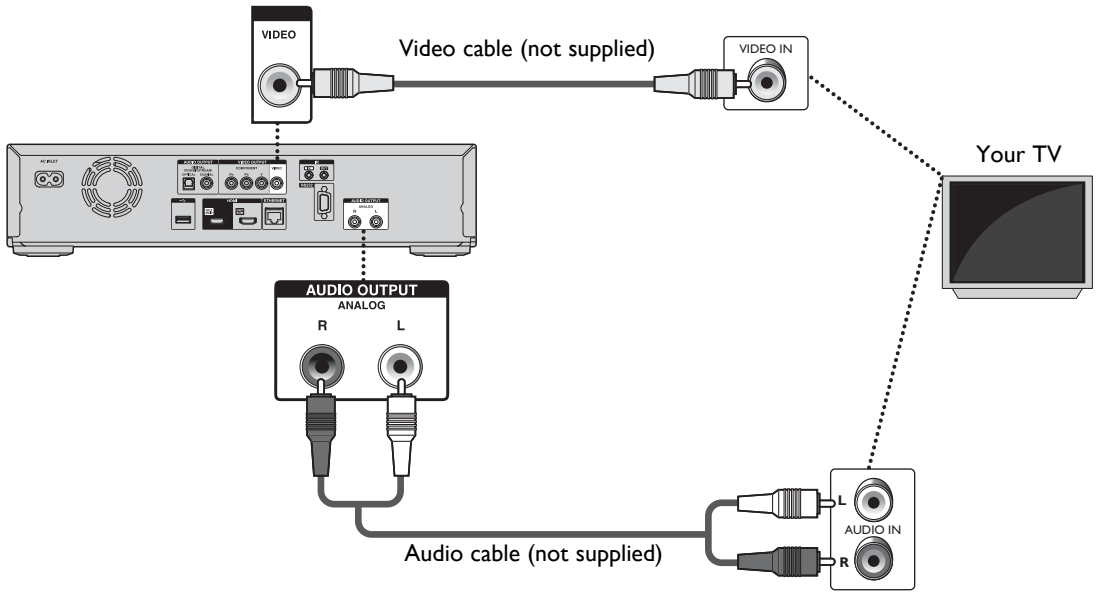
During playback, press **[MODE]** to display the play menu.
e.g.) Blu-ray Disc™



5. CONNECTIONS

5.1 Standard Video + Standard Audio Connection

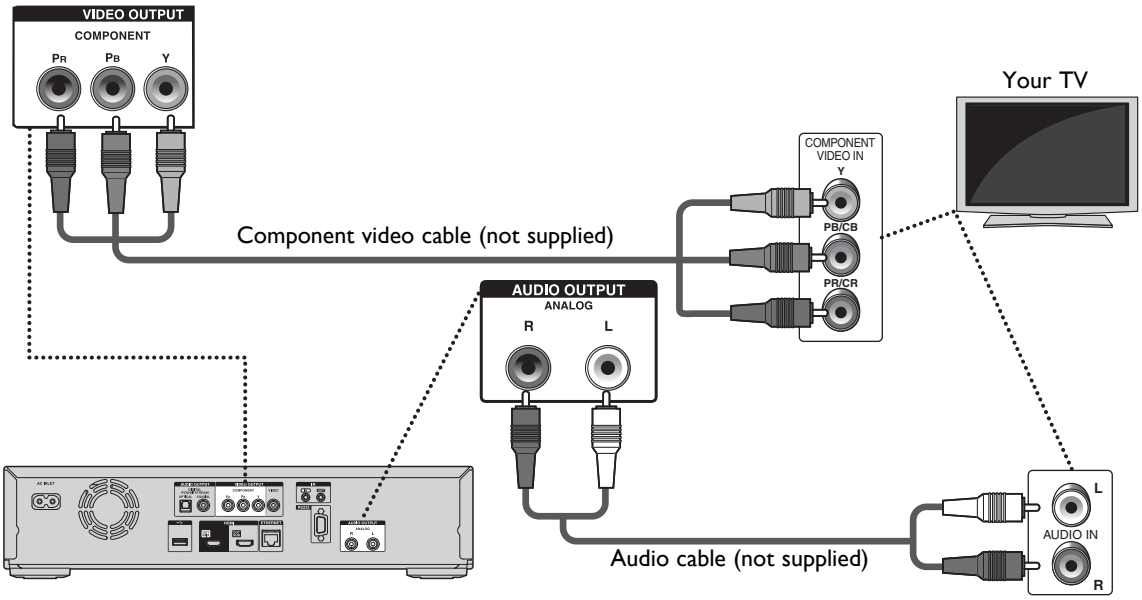
(Supports only 480i/576i resolution.)



- Connect this unit directly to the TV. If the audio / video cables are connected to a VCR then the pictures may be distorted due to the copyright protection system.

5.2 Component Video + Standard Audio Connection

(Supports up to 1080i(*1) resolution.)



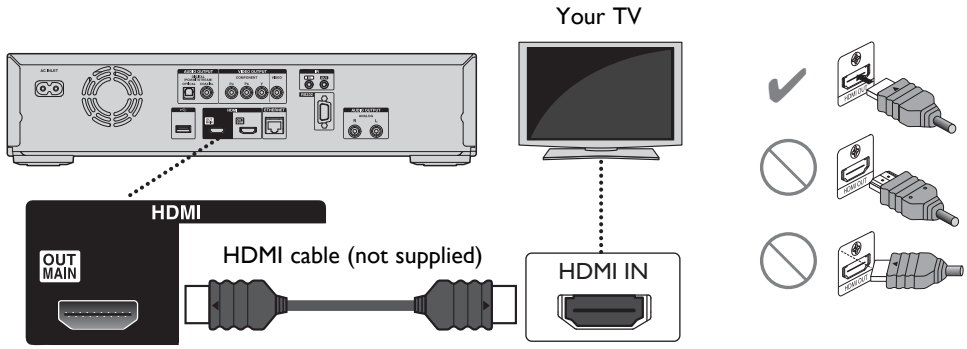
(*1) 1080i : Outputs video data with a frame rate of 25 or 30 frames per second.

Note

- Due to the current Copyright Protection System, Pictures may not be Output when a Video cable is connected. To solve this connect this unit directly to the TV with an HDMI cable.

5.3 HDMI Video / Audio Connection

(Supports up to 1080i(*1), 1080p(*2), 1080p/24(*3) resolution.)



No analogue audio connection required.

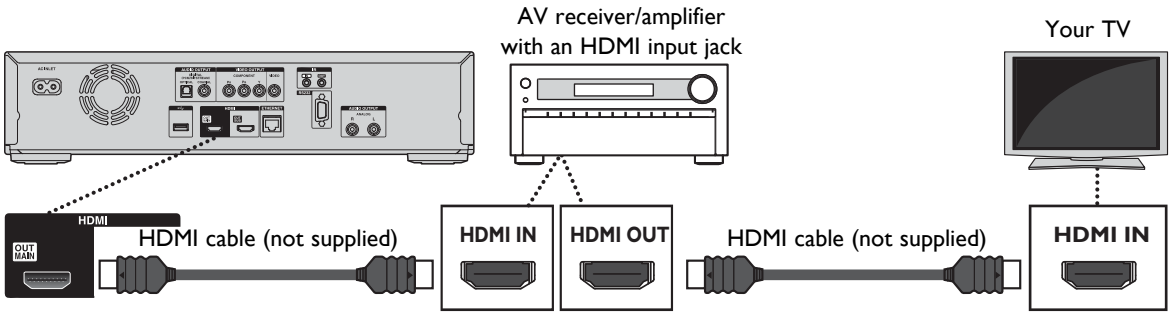
(*1) 1080i : Outputs video data with a frame rate of 25/30 frames per second.
(*2) 1080p : Outputs video data with a frame rate of 50/60 frames per second.
(*3) 1080p/24 : Outputs video data with a frame rate of 24 frames per second.

- Connect an HDMI cable to HDMI OUT MAIN jack and select "Main" in "HDMI Output". Refer to "HDMI Output" on page 43.
- Do not tilt the connector when inserting it into the HDMI jack, and make sure the shapes of the jack and the connector are matched.
- When connected to an HDCP incompatible display device, the picture will not be displayed properly.
- Use an HDMI cable with the HDMI logo (a certified HDMI cable) for this connection.
  High Speed HDMI cable (also known as HDMI category 2 cable) is recommended for better compatibility.
- To enjoy Blu-ray 3D™ video, connect this unit to a 3D capable TV using a 3D compatible HDMI cable.

5.4 Connection to an Audio System

- When you change the connections, all devices should be turned off.
- When making connections with external devices, please refer to their user manuals for additional setup help.

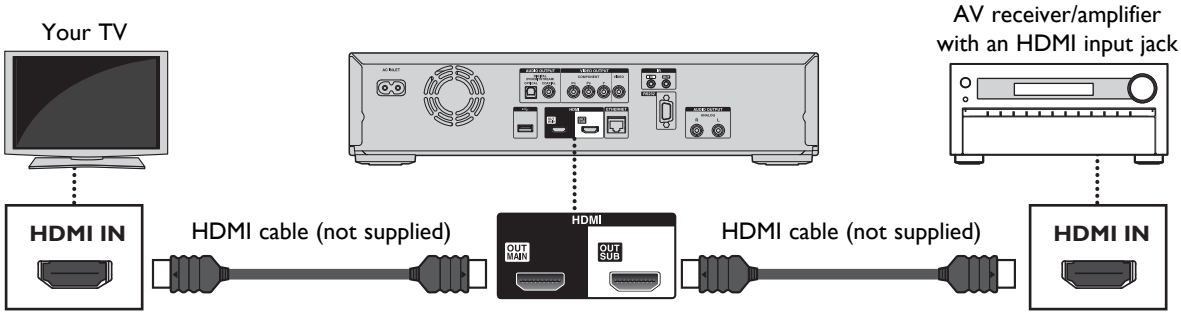
■ Connection using HDMI OUT MAIN jack Only



Note

- To enjoy Blu-ray 3D™ video by this connection, you need to have 3D compatible AV reciever/amplifier and use 3D compatible HDMI cables.
- Connect an HDMI cable to HDMI OUT MAIN jack and select "Main" in "HDMI Output". Refer to "HDMI Output" on page 43.

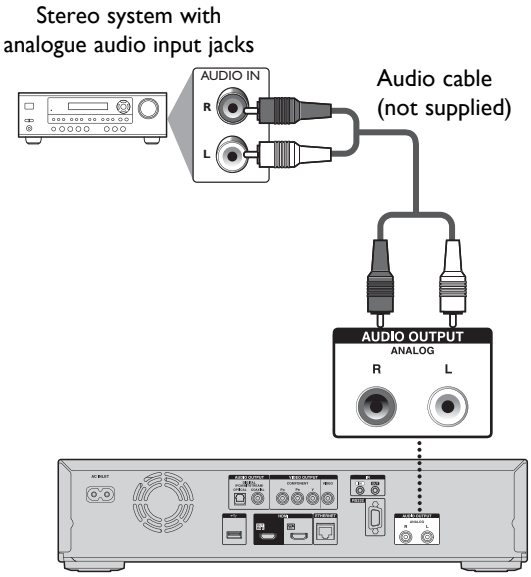
■ **Connection using HDMI OUT MAIN and HDMI OUT SUB jacks**



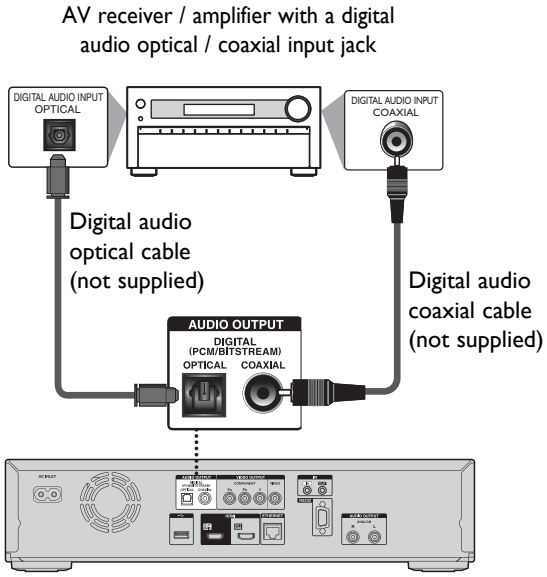
Note

- Connect HDMI cables to HDMI OUT MAIN and HDMI OUT SUB jacks and select "Dual (Main and Sub)" or "AV Split (Main:V, Sub:A)" in "HDMI Output". Refer to "HDMI Output" on page 43.
- HDMI CEC function is only available for HDMI OUT MAIN jack.
- When playing 3D contents with the unit set to "AV Split (Main:V, Sub:A)", a compatible display device and AV receiver/amplifier must be connected to the unit. Without a compatible device audio output will not occur.

■ **2-Channel Analogue Audio Connection**



■ **Digital Audio Connection**


AV receiver / amplifier with a digital audio optical / coaxial input jack
DIGITAL AUDIO INPUT OPTICAL
DIGITAL AUDIO INPUT COAXIAL
Digital audio optical cable (not supplied)
Digital audio coaxial cable (not supplied)
AUDIO OUTPUT
DIGITAL (PCM/BITSTREAM)
OPTICAL
COAXIAL

■ **Audio Output from AUDIO OUTPUT (DIGITAL OPTICAL / COAXIAL) jacks**

	"Digital Output" setting →	"Bitstream"		"LPCM"	
	"BD Audio Mode" setting →	"HD Audio Output"	"Mix Audio Output"	"HD Audio Output"	"Mix Audio Output"
Media ↓	Audio Source ↓	Which audio format can be output depends on the compatibility of the connected device.			
BD-video	Dolby Digital	Dolby Digital		DownMix 2ch LPCM	
	Dolby Digital Plus	Dolby Digital		DownMix 2ch LPCM*1	DownMix 2ch LPCM*2
	Dolby TrueHD	Dolby Digital		DownMix 2ch LPCM*3	DownMix 2ch LPCM*4
	DTS®	DTS®		DownMix 2ch LPCM	
	DTS-HD®	DTS®		DownMix 2ch LPCM*1	DownMix 2ch LPCM*5
	LPCM	DownMix 2ch LPCM		DownMix 2ch LPCM	
DVD-video	Dolby Digital	Dolby Digital		DownMix 2ch LPCM	
	DTS®	DTS®		DownMix 2ch LPCM	
	LPCM	2ch LPCM		2ch LPCM	
DTS-CD	DTS®	DTS®		DownMix 2ch LPCM	
AVCHD	Dolby Digital	Dolby Digital		DownMix 2ch LPCM	
	LPCM	DownMix 2ch LPCM		DownMix 2ch LPCM	
Audio CD	LPCM	2ch LPCM		2ch LPCM	
MP3	MP3	2ch LPCM		2ch LPCM	
Windows Media™ Audio	WMA	2ch LPCM		2ch LPCM	

*1) Fully decoded.
*2) Only the independent substream is decoded.
*3) Dolby TrueHD stream is decoded.
*4) Only the Dolby Digital substream is decoded.
*5) Only the core substream is decoded.

Note

- When playing back a BD-video which only contains the primary audio, the audio output will be the same case as "HD Audio Output" even if "BD Audio Mode" is set to "Mix Audio Output"

■ **Audio Output from HDMI OUT jack**

	"Audio Output" setting →	"Bitstream"		"LPCM"		"Off"
	"BD Audio Mode" setting →	"HD Audio Output"	"Mix Audio Output"	"HD Audio Output"	"Mix Audio Output"	Regardless
Media ↓	Audio Source ↓	Which audio format can be output depends on the compatibility of the connected device.				
BD-video	Dolby Digital	Dolby Digital		Multi LPCM		Mute
	Dolby Digital Plus	Dolby Digital Plus	Dolby Digital	Multi LPCM*1	Multi LPCM*2	Mute
	Dolby TrueHD	Dolby TrueHD	Dolby Digital	Multi LPCM*3	Multi LPCM*4	Mute
	DTS®	DTS®		Multi LPCM		Mute
	DTS-HD®	DTS-HD®	DTS®	Multi LPCM*1	Multi LPCM*5	Mute
	LPCM	Multi LPCM		Multi LPCM		Mute
DVD-video	Dolby Digital	Dolby Digital		Multi LPCM		Mute
	DTS®	DTS®		Multi LPCM		Mute
	LPCM	2ch LPCM		2ch LPCM		Mute
DTS-CD	DTS®	DTS®		Multi LPCM		Mute
AVCHD	Dolby Digital	Dolby Digital		Multi LPCM		Mute
	LPCM	Multi LPCM		Multi LPCM		Mute
Audio CD	LPCM	2ch LPCM		2ch LPCM		Mute
MP3	MP3	2ch LPCM		2ch LPCM		Mute
Windows Media™ Audio	WMA	2ch LPCM		2ch LPCM		Mute

*1) Fully decoded.
*2) Only the independent substream is decoded.
*3) Dolby TrueHD stream is decoded.
*4) Only the Dolby Digital substream is decoded.
*5) Only the core substream is decoded.

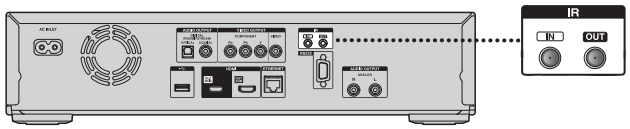
Note

- If the connected device is not compatible with the HDMI BITSTREAM, audio will be output as multi LPCM or 2-channel down-mixed LPCM depending on the capability of the connected device even if you select "Bitstream" in "Audio Output" setting.
- When playing back a BD-video which only contains the primary audio, the audio output will be the same case as "HD Audio Output" even if the "BD Audio Mode" is set to "Mix Audio Output".

■ Controlling AV Components that are Out-of-Range

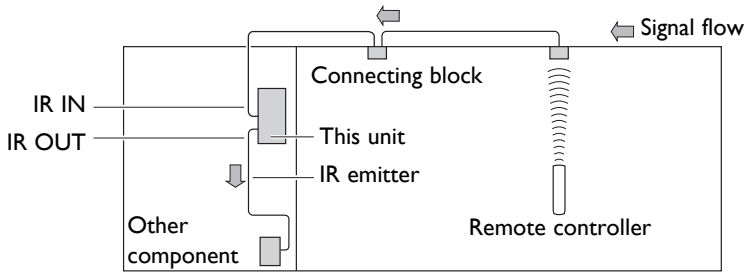
You can use the following multi-room kits to control this unit when it's out of range of the remote controller:

- Multiroom kits such as those made by Niles and Xantech.

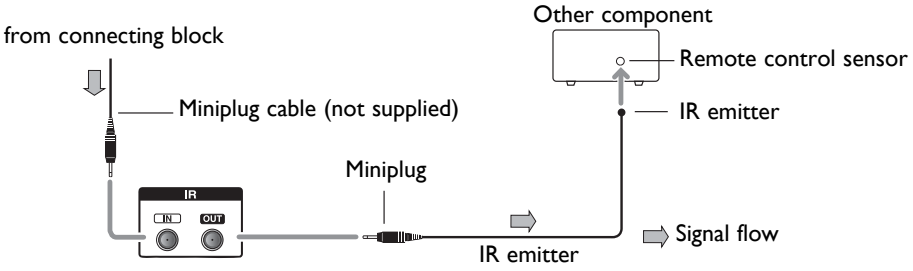


Controlling Other Out-of-Range AV Components

If another AV component is out of range of its remote controller, you can use a commercially available IR emitter to retransmit the remote controller signals received at this unit's IR IN jack, as shown below.



Connect the IR emitter to this unit's IR OUT jack, and place the IR emitter in front of the other AV component's remote control sensor (usually located on its front panel), as shown below. See the instructions supplied with the IR emitter.

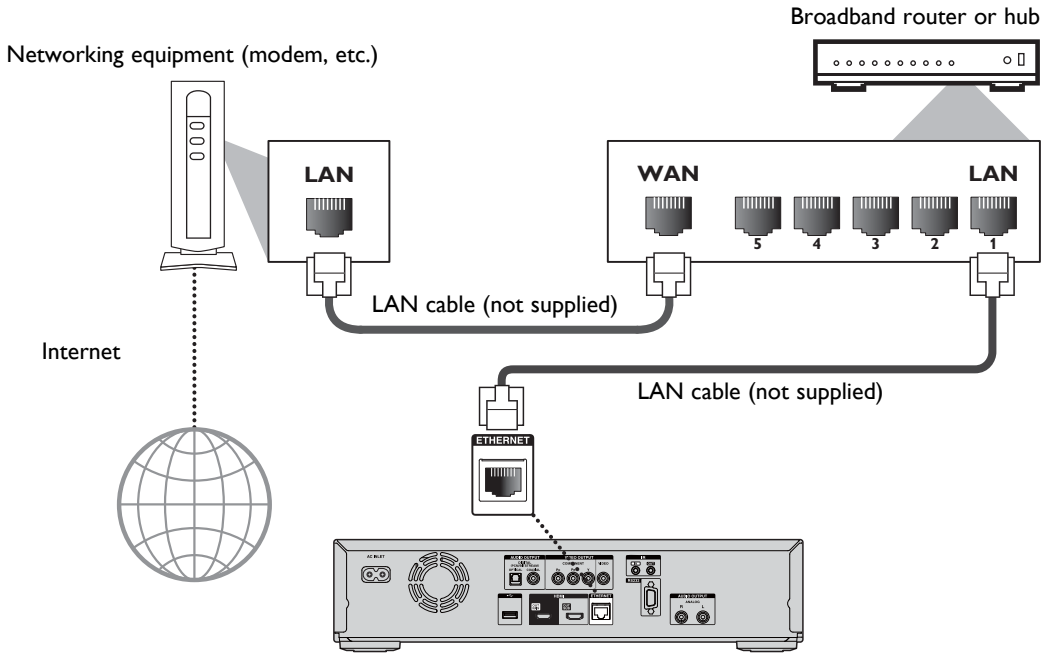


Only remote controller signals received by this unit's IR IN jack are fed through to the IR OUT jack. Signals picked up by this unit's remote control sensor are not output.

5.5 Connection to the Network

By connecting this unit to the Internet, you can update the software via the Internet or access BD-Live™.

- For more information about a software update, refer to "Network Update" on page 46.
- For more information about BD-Live™, refer to "Enjoying BD-Live™ Discs Using Internet" on page 32.



Caution

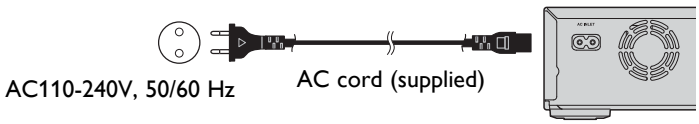
- Do not insert any cable other than a LAN cable to the LAN terminal to avoid damaging the unit.
- Do not connect your PC directly to the LAN terminal of this unit.

Note

- After connecting a LAN cable, set up necessary network settings. (For the network setup, refer to "Network Connection" on page 40.)
- If your modem does not have router functions, connect a router.
- If your modem has router functions but there is no vacant port, add a hub.
- For a router, use a router which supports 10BASE-T / 100BASE-TX ETHERNET standard.
- Please purchase shielded LAN cables at your local store and use them when you connect to network equipment.

5.6 Connecting the AC Cord

After you made all necessary connections, connect the AC cord to the AC INLET. Then connect the AC cord to the AC outlet. Insert the plugs securely. Incomplete connections will result in the generation of noise.



Note

- The type of plug differs depending on your country.

6. BEFORE YOU START

6.1 Finding the Viewing Channel / Source on Your TV

After you have completed all the connections, you must find the viewing channel (external input source) on your TV.

1. After you have made all the necessary connections, press **[⏻ (on/standby)]** to turn on the unit.
2. Turn on your TV.
3. Press the button on the TV's remote control that accesses the external input channel. It may be labelled "SOURCE", "AV", "AUX" or "SELECT" (refer to your TV's user manual).

This is the correct viewing channel (external input source).

- If the TV is connected by an HDMI cable, it may take a while for the opening picture to come up.
- If connecting this unit to TV via HDMI OUT MAIN jack, the opening picture will not appears on the TV screen.
- If a certain amount of time has passed since you turned on the unit, welcome screen appears for the first time you turn on the unit.

7. INFORMATION ON PLAYBACK

7.1 Information on Playback

■ Playable Discs and Files

Playable discs	Logos
Blu-ray Disc™ - BD-video - Blu-ray 3D™ Disc - Blu-ray 3D™ only Disc - BD-R/BD-RE* (Recorded in BDMV format) (Disc not finalised may not be played back.)	 3D ONLY
DVD-video	
DVD-RW (finalised video mode discs only)	
DVD-R (finalised video mode discs only)	
CD-DA (audio CD)	
CD-RW	
CD-R	
DTS-CD	–

* Due to the intentional progression of the Blu-ray Disc™ format by its standard setting authority, the company cannot guarantee or warrant the playability of future extensions of the Blu-ray Disc™ format with this product.

Playable files	Media
AVCHD	DVD-RW/-R SD cards using USB card reader / USB hub (not supplied)
MP3 Windows Media™ Audio JPEG	BD-RE/-R, DVD-RW/-R, CD-RW/-R, USB flash drive

Readable devices	Playable files / data
USB flash drive	MP3, WMA, JPEG, picture-in-picture commentary, subtitles or other extras for BD-ROM ver. 2 (Profile 2.0 / Profile 1.1)

■ Recommended Specifications

AVCHD

This unit cannot play back stand-alone AVCHD files (*.m2ts, *.mts or *.m2t) written to a DVD or copied to an SD card.

The DVD or SD card containing AVCHD files must have a proper file and folder structure meeting AVCHD format specifications. Please use AVCHD compliant device / software to burn or copy AVCHD files to DVD or SD card. (Please refer to user manuals of your device / software for more information.)

MP3 / WMA

- Sampling frequency : 32 kHz, 44.1 kHz or 48 kHz
- Constant bit rate : 112 kbps - 320 kbps (MP3), 48 kbps - 192 kbps (WMA)

JPEG

Resolution

- Upper limit : 4,096 x 4,096 dots (sub sampling is 4:4:4) 5,120 x 5,120 dots (sub sampling is up to 4:2:2 or 4:2:0)
- Lower limit : 32 x 32 dots
- Maximum file size of a picture : 12 MB

■ Folder / File Number Limitations

Blu-ray Disc™, DVD and USB flash drive

- 999 folders (groups) and 9,999 files.

CD

- 255 folders (groups) and 999 tracks / files.

Caution / Note for USB flash drive

Caution

- Onkyo is not responsible if the USB flash drive is not supported nor is it responsible for damage or loss of data from the device.
- Do not try to open or modify the USB flash drive.
- Do not touch the terminal surface with your fingers or any metals.

Note

- This unit supports USB flash drive with FAT16 / FAT32 file system.
- This unit does not support NTFS file system.
- This unit may not read USB flash drives formatted on a computer. If that is the case, please reformat the USB flash drives in this unit and try again.
- Please keep the USB flash drives in their cases when you are not using them.
- Some USB flash drives may not work with this unit.
- This unit can read SD cards using USB card reader / USB hub (not supplied).
  - Readable cards : SD Memory Card (8 MB - 2 GB)
    miniSD Card (16 MB - 2 GB)
    microSD Card (256 MB - 2 GB)
    SDHC Memory Card (4 GB - 32 GB)
    miniSDHC Card (4 GB - 8 GB)
    microSDHC Card (4 GB - 16 GB)
  - Readable files : AVCHD / MP3 / WMA / JPEG
- Depending on a USB card reader or USB hub, connected card or device may not be recognised.

■ Unplayable Discs and Files

The following discs will not be played back in this unit.

- CD-ROM
- CD-I (compact disc-interactive)
- DVD-RAM
- VSD (video single disc)
- DVD-audio
- video CD
- HD DVD
- SVCD
- SDXC Memory Card
- microSDXC Memory Card
- unfinalised disc
- BD-R/BD-RE (Recorded in BDAV format)
- Cartridge Type Disc
- Blu-ray Disc™ / USB flash drive that contains AVCHD files
- Blu-ray Disc™ / DVD hybrid disc (played back as a BD-video only)
- DVD-RW/-R recorded in non compatible recording format
- Super Audio CD - Only the sound on the CD layer can be heard. The sound on the high-density Super Audio CD layer cannot be heard.
- Playability of dual discs is not guaranteed.
- This unit cannot play back the disc contents protected by Windows Media™ Digital Rights Management (DRM).

■ Region Codes

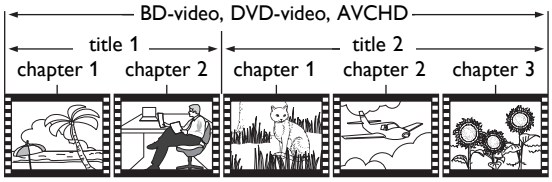
This unit has been designed to play back BD-video with region "B" and DVD-video with region "2" or "ALL". You cannot play back BD-video or DVD-video that are labelled for other regions. Look for the symbols on your BD-video or DVD-video. If these region symbols do not appear on your BD-video or DVD-video, you cannot play back the disc in this unit. The letter or number inside the globe refers to region of the world. A BD-video or DVD-video labelled for a specific region can only be played back in the unit with the same region code.

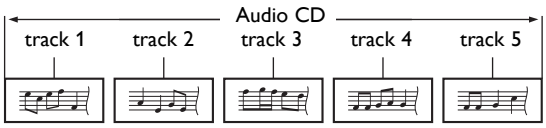
BD-video

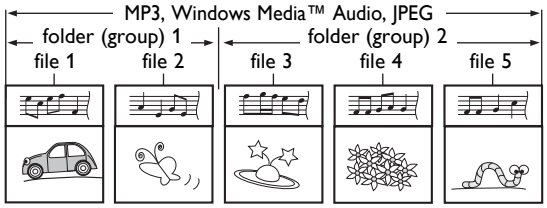
DVD-video

■ Hint for Disc Playback

The contents of a disc are generally divided into sections or folders (groups of titles / files) as shown below.







■ Description for Icons

[Folder] : group (folder) icon

[Music] : music file icon

[Photo] : photo file icon

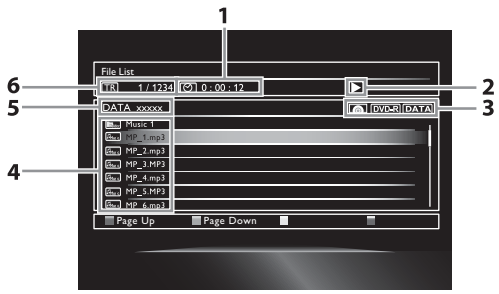
– "Folders" refers to the groups of files.
– "Tracks" refers to the contents recorded on the audio CD.
– "Files" refers to the contents on a disc which are recorded in MP3, WMA, JPEG file format.

Note

• Unrecognisable characters will be replaced with "*".

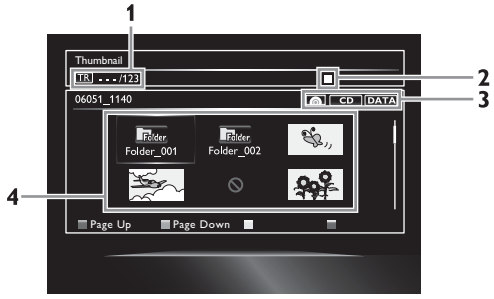
7.2 Guide to File List

■ **Music File List**
e.g.) MP3 mode



1. Elapsed playing time of the current track
2. Playback status
3. Media type
4. Group (folder) / File list
5. Name of disc / USB flash drive
6. Current track (file) number / Total number of tracks (files)

■ **Picture File List**



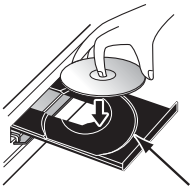
1. Current file number / Total number of files
2. Playback status
3. Media type
4. Group (folder) / File list (thumbnails)

■ **How to Navigate through the Track / File List**

- Use **[▲/▼]** to move the highlight up and down in the list.
- To access the files in a group (folder), select the desired group (folder), then press **[ENTER]**.
- Press **[◄]** or **[RETURN]** to go back to the previous hierarchy.
- Press **[A]** or **[B]** to change the page of the list.
- Press **[D]** to go back to the media mode screen.
- Press **[HOME ⌂]** to exit.

7.3 How to Insert a Disc

1. Press **[OPEN / CLOSE ⏏]** to open the disc tray.
2. Place the disc on the disc tray with its label side facing up.



Align the disc to the disc tray guide.

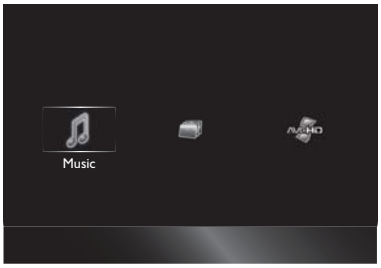
3. Press **[OPEN / CLOSE ⏏]** to close the disc tray.
   - It may take a while to load the disc.

8. BASIC PLAYBACK

8.1 Playing Back a Disc

BD-V DVD-V CD AVCHD MP3 WMA JPEG

1. Insert a disc (refer to "How to Insert a Disc" on page 26).
   - Due to the current Copyright Protection System, Pictures may not be Output when a Video cable is connected. To solve this connect this unit directly to the TV with an HDMI cable.
   - For Blu-ray Disc™ / DVD / audio CD or a disc containing only one type of file, playback will start automatically. If not, press **[► (play)]**.
   - Some discs may show a title or a disc menu. In this case, refer to "Using the Title / Disc / Pop-up Menu" on page 29.
2. Select the file type you want to play back, then press **[ENTER]**.
   e.g.)



3. For "AVCHD", playback will start automatically.
   For "Music", track / file list will be displayed. Select a group (folder) or track / file you want to play back, then press **[► (play)]** or **[ENTER]** to start playback.
   - Refer to "Music File List" on page 26 and "How to Navigate through the Track / File List" on page 26.

   For "Photo", thumbnail screen will appear.
   - Refer to "Picture File List" on page 26 and "How to Navigate through the Track / File List" on page 26.

   To skip to the next track / file:
   Press **[►►I (skip)]**.

   To return to the beginning of the current track / file or to skip to the previous track / file:
   Press **[I◄◄ (skip)]**.

   To pause playback:
   Press **[II (pause)]**.

   To return to the normal playback:
   Press **[► (play)]**.

   To stop playback:
   Press **[■ (stop)]**.
   Playback will be in Resume-On-Stop mode.

■ **Resume-On-Stop Mode**
Blu-ray Disc™ / DVD / AVCHD:
When you press **[► (play)]** next time, the playback will start from the point where it has been stopped.

Audio CD:
Playback will start from the point where it is stopped next time you press **[► (play)]**.
If you press **[ENTER]** instead of **[► (play)]**, playback will start from the beginning of the track / file instead of resuming from the stop point.

MP3 / WMA / JPEG:
Playback will start from the beginning of the current file next time you press **[► (play)]** or **[ENTER]**.

Note

- Playback will also stop and the home menu will appear when you press **[HOME ⌂]**.
- For BD-Java application, the Resume-On-Stop may not be available.
- If you press **[ENTER]** instead of **[► (play)]**, playback can be started from the beginning of the disc even if it was in the Resume-On-Stop mode.
- Resume-On-Stop mode remains in effect even after power is turned off, but will be cancelled once the disc is ejected.
- With regard to the multi-border BD-RE/-R, additionally recorded sections cannot be recognised.
- With regard to the multi-border DVD-RW/-R, additionally recorded sections may not be recognised.

Note for JPEG Playback

- Every press of **[◄/►]** will turn the image by 90 degrees when an image is displayed.
- During playback, press **[TOP MENU]** to display thumbnail screen.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution JPEG files take longer to be displayed.
- Progressive JPEG files (JPEG files saved in progressive format) cannot be played back in this unit.

8.2 Playing Back a Blu-ray 3D™ Disc

BD-V

This unit can play back Blu-ray 3D™ discs which contain stereoscopic 3D video. In order to view Blu-ray 3D™ videos, you need to have the following:

– **3D capable TV**
– **3D compatible HDMI cable**
– **3D glasses**
– **Blu-ray 3D™ Disc or Blu-ray 3D™ only Disc**

1. Connect 3D capable TV with a 3D compatible HDMI cable.
   • Refer to "HDMI Video / Audio Connection" on page 16.
2. Insert a Blu-ray 3D™ Disc or a Blu-ray 3D™ only Disc.
   • Refer to "How to Insert a Disc" on page 26.
3. Playback may start automatically. If not, press **[► (play)]**.
   Some discs may show a title or a disc menu. In this case, refer to "Using the Title / Disc / Pop-up Menu" on page 29.

   To pause playback:
   Press **[II (pause)]**.

   To return to normal playback:
   Press **[► (play)]**.

   To stop playback:
   Press **[■ (stop)]**.
   Playback will be in Resume-On-Stop mode, and the home menu will appear.

■ **Resume-On-Stop Mode**
When you press **[► (play)]** next time, the playback will start from the point where it has been stopped.

Caution

- Watching 3D videos may cause headache, dizziness or tiredness. To avoid such consequences, do not watch 3D videos for a long period of time.
- Watching 3D videos is not recommended for the following people:
  – People who are susceptible to motion sickness
  – Children from walking age to seven years
  – Pregnant woman

For more information, refer to "IMPORTANT HEALTH AND SAFETY INFORMATION FOR 3D TELEVISIONS" on page 55.

Note

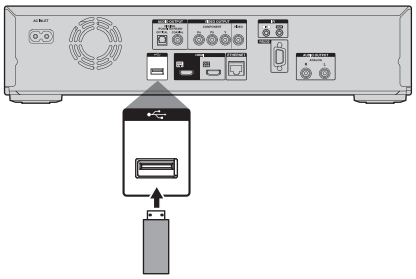
- For more information, refer to the 3D TV's manual.
- 3D indicator lights up in blue when a 3D video is being played back.
- When "3D Output" is set to "Auto (XX)" and your TV is not 3D capable, playback of Blu-ray 3D™ discs will revert to 2D depending on the disc.
- You can turn off 3D output mode by setting "3D Output" to "2D". (Refer to page 38.)
- For some Blu-ray 3D™ only discs, playback in 2D mode is not possible.
- You can check the current output mode (2D or 3D) by pressing **[DISPLAY]** during playback.
- If you change "3D Output" setting to "2D" while the unit is in the Resume-On-Stop mode of Blu-ray 3D™ Disc playback, the resume information will be cleared.

8.3 Playing Back a USB Flash Drive

MP3 WMA JPEG

You can play back MP3 / WMA / JPEG files in a USB flash drive. With the USB flash drive, you can also enjoy the following functions.

– Special additional contents for BD-ROM Profile 1 ver.1.1. (For more information about the special additional contents, refer to the instruction book that came with the disc.)
– BD-Live™ function (BD-ROM ver. 2 Profile 2.0). (For more information about BD-Live™, refer to page 32.)



1. Connect a USB flash drive.
2. Press **[HOME ⌂]**.
3. Use **[▲/▼/◄/►]** to select "USB", then press **[ENTER]**.
   • If a USB card reader or USB hub is connected, drive selection screen appears. Use **[▲/▼/◄/►]** to select a drive you want to access, then press **[ENTER]**.
4. Follow steps 2 to 3 in "Playing Back a Disc" on page 27.

To remove the USB flash drive

In stop mode, pull it out slowly.

Caution

- Do not remove the USB flash drive or switch the unit to the standby mode while the contents of the drive are being accessed. It may result in malfunction or loss of the drive's data.
- Onkyo cannot be held responsible if your USB flash drive is not supported, nor will Onkyo accept any liability for damage or loss of stored data.
- If you connect SD card or USB flash drive via USB card reader or USB hub, BD-ROM data will be write onto the first connected card or device. Connecting a USB flash drive directly to this unit is recommended.

Note

- The resume information will be cleared when;
  – **[■ (stop)]** is pressed while in the Resume-On-Stop mode.
  – the USB flash drive is removed.
  – the unit is switched to standby mode.
- Do not delete the folders or files in the USB flash drive with your computer. This unit may not read USB flash drives formatted on a computer.
- If a folder or file name includes one of the following unrecognisable characters, the folder or file name may not be displayed correctly.
  – Unrecognisable characters:
  . , " = + [ ] ; / \ : | ¥
- This unit can read MP3 / WMA / JPEG files and AVCHD on an SD card by using USB card reader / USB hub (not supplied).

8.4 Using the Title / Disc / Pop-up Menu

BD-V DVD-V AVCHD

Some BD-videos, DVD-videos or AVCHD files may contain a title menu which describes the contents of the disc, or a disc menu which guides you through the available functions in the disc.

With such discs, a title menu or a disc menu may appear automatically when you insert the disc. Otherwise, press **[TOP MENU]** or **[POP UP MENU / MENU]** to call up the menu. Refer to the disc's manual on how to navigate through the menu.

Note

- Menus vary among discs. Refer to the information accompanying the disc for details.
- **[TOP MENU]** or **[POP UP MENU / MENU]** may not work with some discs.

9. SPECIAL PLAYBACK

9.1 Fast Forward / Fast Reverse

BD-V DVD-V CD AVCHD MP3 WMA

1. During playback, press **[▶▶ (forward)]** repeatedly for fast forward.
   During playback, press **[◀◀ (reverse)]** repeatedly for fast reverse.
   Every time you press **[▶▶ (forward)]** or **[◀◀ (reverse)]**, the playback speed will change.
2. Press **[▶ (play)]** to return to normal playback.

Note

- For Blu-ray Disc™, DVD and AVCHD, speed changes in 5 different levels.
- For audio CD, MP3 and WMA, speed changes in 3 different levels.
- For audio CD, MP3 and WMA, fast forward / fast reverse search between different files or tracks are not available.

9.2 Slow Forward Playback

BD-V DVD-V AVCHD

1. During playback, press **[II (pause)]**. Then press **[▶▶ (forward)]**.
   Every time you press **[▶▶ (forward)]**, the playback speed changes in 3 different levels.
2. Press **[▶ (play)]** to return to normal playback.

Note

- Only slow forward is available.
- Set "Still Mode" setting to "Field" in "Video Out" menu if pictures in the slow forward playback mode are blurred.

9.3 Step by Step Playback

BD-V DVD-V AVCHD

1. In pause mode, press **[▶▶I (skip)]** repeatedly.
   Every time you press **[▶▶I (skip)]**, playback will advance one step at a time.
2. Press **[▶ (play)]** or **[II (pause)]** to return to normal playback.

Note

- Only step by step forward is available.
- Set "Still Mode" setting to "Field" in "Video Out" menu if pictures during step by step playback mode is blurred.

9.4 Repeat Playback

Available repeat function varies depending on the discs.

1. During playback, press **[REPEAT]**.
2. Use **[▲/▼]** to select the desired repeat mode.

Repeat Mode	Available Media
Chapter Repeat	BD-V DVD-V AVCHD
The current chapter will be played back repeatedly.	
Title Repeat	BD-V DVD-V AVCHD
The current title will be played back repeatedly.	
Track Repeat	CD MP3 WMA JPEG
The current track or file will be played back repeatedly.	
All Repeat	CD
All tracks in the media will be played back repeatedly.	
Group Repeat	MP3 WMA JPEG
The current group (folder) will be played back repeatedly.	
Random Repeat (Audio CD)	CD
Repeats the random playback.	
Random Repeat (MP3 / WMA / JPEG)	MP3 WMA JPEG
Repeats the random playback in a folder.	

3. Press **[RETURN]** to exit.

Note

- The repeat setting will be cancelled when you stop playback.
- When the repeat setting is set for a MP3 or WMA folder (file), the repeat setting will be cancelled if you select other MP3 or WMA folder (file) to play back.

9.5 A-B Repeat

BD-V DVD-V CD AVCHD

You can play back the specific part (between point A and point B) repeatedly.

1. During playback, press **[A-B]** at the desired starting point A.
2. During playback, press **[A-B]** at the desired ending point B.
   As soon as you set the point B, the part between point A and point B will start playback repeatedly.
   - To cancel the A-B repeat, press **[A-B]** again.

Note

- Point B should be set within the same title or track as point A.
- A-B repeat is not available with some scenes.
- To cancel the A point which was set, press **[CLEAR]**.

9.6 Slide Show

JPEG

1. Follow steps 1 to 2 in "Playing Back a Disc" on page 27.
2. Open the folder which contains the desired JPEG files.
3. Use **[▲/▼/◄/►]** to select a desired file to be played back, then press **[► (play)]** or **[ENTER]**.
   - An image will be played back from the selected file and go to the next one in turn every 10 seconds.
4. Press **[■ (stop)]** to stop playback.

To return to the first item:
Press **[TOP MENU]**.

To return to the file played last:
Press **[POP UP MENU / MENU]**.

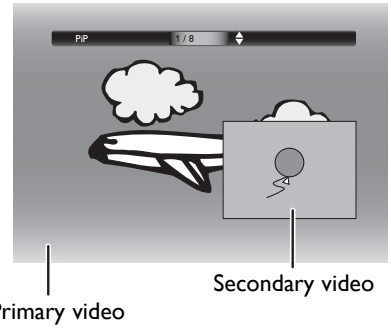
Note

- Large-size JPEG files take a few moments to be displayed.

9.7 PiP (BONUSVIEW™) Setting

BD-V

Some BD-videos have the PiP function which enables you to display the secondary video in the primary video.



1. During playback, press **[PIP]**.
2. Use **[▲/▼]** to select the secondary video you want to show.
   - The secondary video will be displayed with the secondary audio.
   - Use **[◄/►]** to switch between current setting and "Off".
3. Press **[RETURN]** to exit.
   - On how to output the secondary audio, refer to "Switching Audio Soundtrack" on page 34.

Note

- You can also change the PiP setting from the play menu. Play menu can be called up by pressing **[MODE]**.

9.8 Enjoying BD-Live™ Discs Using Internet

BD-V

You can enjoy BD-Live™ which enables you to use interactive features when the unit is connected to the Internet.
Examples of BD-Live™ features:

- Online access to additional content such as movie trailers, subtitles, BD-Java applications, etc.
- While downloading, special video data may be played back.
  - **Service and functions differ depending on the disc. Follow the instructions given by the disc when using the BD-Live™ function.**
  - **Connect USB flash drive of at least 1 GB capacity before using BD-Live™ features on a Blu-ray Disc™.**
  - **Do not remove the USB flash drive while using BD-Live™ features.**

Note

- You must connect the unit to the Internet and set up necessary settings in order to use BD-Live™.
- For the network connection, refer to "Connection to the Network" on page 21.
- For the network setup, refer to "Network Connection" on page 40.
- For certain discs, BD-Live™ setting in "Manual" Setup may need to be changed. (Refer to page 40.)
- Depending on your connection environment, it may take time to connect to the Internet or the Internet may not be connected.
- When BD-Live™ functions are used and the unit is connected to the Internet, you may be charged for this communication.
- Some discs with BD-Live™ function require memory when playing back the content. If you cannot play back a disc with BD-Live™ function, connect USB flash drive (1 GB or more) which is formatted on this unit.

Note for AACS Online

- The player or disc IDs may be sent to the content provider when playing back a disc with BD-Live™ function.
- If you save your viewing history on the server by using these IDs, you will be introduced to other similar movies.
- You can save game score histories.

9.9 Title / Chapter Search

BD-V DVD-V AVCHD

■ **Using [|◀◀ (skip)] / [▶▶| (skip)]**

1. During playback, press **[▶▶| (skip)]** to skip the current title or chapter and move to the next.
   The title or chapter will move forward one at a time.
   • If there is no chapter in one title, the current title may be skipped.
   To go back to the beginning of the current title or chapter, press **[|◀◀ (skip)]**.
   Press **[|◀◀ (skip)]** repeatedly to go to the previous title or chapter. The title or chapter may move backward one at a time.

■ **Using [SEARCH]**

1. During playback, press **[SEARCH]**.
2. Use **[▲/▼]** to select "TT" or "CHP", then press **[ENTER]**.
   e.g.) Blu-ray Disc™

3. Use **[▲/▼/◀/▶]** to select the title / chapter number.
4. Press **[ENTER]**.
   Playback will start from the beginning of the title / chapter.
5. Press **[RETURN]** to exit.

Note

• You can also search from the play menu. Play menu can be called up by pressing **[MODE]**.

■ **Using [the Number buttons] (Direct Search)**

Chapter Search

During playback, enter the chapter number you want to search using **[the Number buttons]**. Playback of the chapter will start in a few seconds.

Note

• As for the BD-video, how it performs will be strongly determined by the disc, and may not perform as described.

9.10 Track Search

CD MP3 WMA JPEG

1. During playback, press **[▶▶| (skip)]** to skip the current track or file and move to the next.
   The track / file will move forward one at a time. To go back to the beginning of the current track / file, press **[|◀◀ (skip)]**.
   Press **[|◀◀ (skip)]** repeatedly to go to the previous track / file. The track / file will move backward one at a time.

9.11 Time Search

BD-V DVD-V CD AVCHD

1. During playback, press **[SEARCH]**.
2. Use **[▲/▼]** to select " ", then press **[ENTER]**.
   e.g.) Blu-ray Disc™

3. Use **[the Number buttons]** or **[▲/▼]** to enter the time count you want to jump to.
   e.g.) Entering 1 hour 45 minutes and 15 seconds.

4. Press **[ENTER]**.
   Playback will start from the desired time entered.
5. Press **[RETURN]** to exit.

Note

• You can also search from the play menu. Play menu can be called up by pressing **[MODE]**.

9.12 Switching Subtitles

Some video materials may have subtitles in one or more languages. For commercially available discs, the supported languages can be found on the disc case. Follow the steps below to switch the subtitle language during playback.

BD-V

1. During playback, press **[SUBTITLE]**.
2. Use **[▲/▼]** to select "Primary", "Secondary" or "Style", then press **[ENTER].**
   - "Primary" : Sets the subtitle for the primary video.
   - "Secondary" : Sets the subtitle for the secondary video.
   - "Style" : Sets style of the subtitle.
3. Use **[▲/▼]** to select your desired subtitle or style.

   - Use **[◄/►]** to switch between current subtitle setting and "Off".
4. Press **[RETURN]** to exit.

DVD-V AVCHD

1. During playback, press **[SUBTITLE]**.
2. Use **[▲/▼]** to select your desired subtitle.

   - Use **[◄/►]** to switch between current subtitle setting and "Off".
3. Press **[RETURN]** to exit.

Note

- Some discs will only allow you to change the subtitles from the disc menu or pop-up menu. Press **[TOP MENU]** or **[POP UP MENU / MENU]** to display the disc menu or pop-up menu.
- If the disc has no subtitle language or subtitle style, "Not Available" will be displayed on the TV screen.
- During playback of the secondary video, the primary subtitle setting is not available except when there is no subtitle for the secondary video.
- You can also change the subtitle setting from the play menu. Play menu can be called up by pressing **[MODE]**.

9.13 Switching Audio Soundtrack

When playing back video material recorded with two or more soundtracks (these are often in different audio languages or audio formats), you can switch them during playback. For Blu-ray Disc™, available audio varies depending on "BD Audio Mode" setting.

BD-V

1. During playback, press **[AUDIO]**.
2. Use **[▲/▼]** to select "Primary" or "Secondary", then press **[ENTER]**.
   - "Primary" : Sets the audio for the primary video.
   - "Secondary" : Sets the audio for the secondary video.
3. Use **[▲/▼]** to select your desired audio stream channel.

   - For "Secondary", use **[◄/►]** to switch between current audio setting and "Off".
4. Press **[RETURN]** to exit.

DVD-V CD AVCHD

1. During playback, press **[AUDIO]**.
2. Use **[▲/▼]** to select your desired audio stream channel.

   - For audio CD, you can select following options.
   - "Stereo" : Both right and left channels are active (stereo).
   - "L-ch" : Only left channel is active.
   - "R-ch" : Only right channel is active.
3. Press **[RETURN]** to exit.

Note

- The secondary audio will not be output when the secondary video is not displayed or when "BD Audio Mode" is set to "HD Audio Output". (For some Blu-ray™ discs, secondary audio will be output even when secondary video is off.)
- The sound mode cannot be changed during playback of discs not recorded in multiple audio mode.
- Some discs allow changing the audio language setting on the disc menu. (Operation varies depending on the discs. Refer to the manual accompanying the disc.)
- **[AUDIO]** may not work on some discs with multiple audio streams or channels (e.g. DVDs that allow changing audio setting on the disc menu).
- If the disc has no audio language, "Not Available" will be displayed on the TV screen.
- For DTS-CD (5.1 music disc), selecting audio streams or channels are not available.
- You can also change the audio setting from the play menu. Play menu can be called up by pressing **[MODE]**.

9.14 Switching Camera Angles

BD-V DVD-V

Some BD-videos and DVD-videos contain scenes which have been shot simultaneously from various angles. You can change the camera angle when appears on the TV screen.

1. During playback, press **[ANGLE]**.
   - The selected angle will be displayed on the display bar at the top of the TV screen.
2. Use **[▲/▼]** to select your desired angle.
3. Press **[RETURN]** to exit.

Note

- If "Angle Icon" setting is set to "Off", will not appear on the TV screen.
- You can also change the angle setting from the play menu. Play menu can be called up by pressing **[MODE]**.

9.15 Adjusting the Picture

BD-V DVD-V AVCHD

You can adjust the picture quality and store the setting you have adjusted on “Memory1” to “Memory (Source Direct)”.

1. During playback, press **[MODE]** to display the play menu.
2. Use **[▲/▼]** to select “Picture Control”, then press **[ENTER]**.
3. Use **[▲/▼]** to select a memory from “Memory1” to “Memory (Source Direct)” to store your setting, then press **[ENTER]**.
   - When “Video Resolution” is set to “Source Direct”, “Picture Control” will be set to “Memory (Source Direct)” automatically.

4. Use **[▲/▼]** to select an item to be adjusted, then press **[ENTER]** and use **[▲/▼]** to adjust the setting.

Item	Description	Adjustment range	Default setting
Contrast	Adjusts the difference between the bright and dark parts of the picture.	-7 to +7	0
Brightness	Adjusts the brightness of the picture.	0 to +15	0
Sharpness*	Adjusts the sharpness of the picture.	-2 to +2	0
Gamma Correction*	Adjusts the dark positions of the picture.	-2 to +2	0
ICR Red	Adjusts the red colour of the picture.	0 to +7	0
ICR Blue	Adjusts the blue colour of the picture.	0 to +7	0
ICR Green	Adjusts the green colour of the picture.	0 to +7	0
Colour	Adjusts the colour density of the picture.	-7 to +7	0
Hue	Adjusts the balance between the green and red.	-7 to +7	0
Noise Reduction	Reduces noise in the luminance signal and chroma signal.	Off, 1to 3	Off
MPEG NR	Reduces block noise and mosquito noise.	Off, 1to 3	Off
Edge Enhancer	Emphasises the edge of the picture.	Off, Soft, Middle, Strong	Off
Qdeo True Color	Adjusts the smoothness of the picture. It is available for 10 or 12 bit display.	Off, Low, Middle, High	Off
Progressive Mode	Selects the setting of the progressive scan.	Auto, Video	Auto

*) It may take several seconds to reflect the adjusted setting.

Note

- The setting remains even you turn the unit into the standby mode except unplug the AC cord.
- ICR is the abbreviation of Intelligent Color Remapping.
- Qdeo True Color Processing (QTC) dynamically expands 8-bit video to use the full dynamic range offered by 10 and 12 bit displays, eliminating contours while preserving detail.
- Qdeo True Color is adjustable and effective when this unit is connected with the display device which is compatible with Deep Colour.
- Picture control setting is available only video output from HDMI OUT MAIN jack.

10. LIST OF SETTINGS

In the setup menu, you can customise various kinds of settings as you prefer. Refer to the following instructions to navigate through the setup menu.

1. Press **[HOME ⌂]** to access the home menu.
2. Use **[▲/▼/◄/►]** to select "Settings", then press **[ENTER]**.
3. Use **[▲/▼]** to select the desired setting, then press **[ENTER]**.
4. Use **[▲/▼]** to move the highlight up and down in the list.
5. To make a selection or to access options of an item, select the desired item, then press **[ENTER]**.
   - To go back to the previous screen, press **[RETURN]**.
6. Press **[HOME ⌂]** to exit.

Refer to the following table for the types of settings you can customise.
The item highlighted in gray is the default setting.

Category	Menus / Options	
Video Out	Picture Control	Memory1
		Memory2
		Memory3
		Memory4
		Memory (Source Direct)
	TV Aspect	16:9 Wide
		16:9 Squeeze
		4:3 Letter Box
		4:3 Pan & Scan
	Component Output	480i/576i
		480p/576p
		720p
		1080i
	Still Mode	Auto
		Field
		Frame
Audio Out	DRC	Auto
		On
		Off
	Digital Output	Bitstream
		LPCM
	Downsampling	On
		Off
	BD Audio Mode	HD Audio Output
		Mix Audio Output

Category	Menus / Options		
HDMI	HDMI Output	Main	
		Dual (Main and Sub)	
		AV Split (Main:V, Sub:A)	
	3D Output	Auto	
		3D	
		2D	
	Video Resolution	Auto	
		480i/576i	
		480p/576p	
		720p	
		1080i	
		1080p	
		1080p/24	
		Source Direct	
	HDMI Select	YCbCr	
		RGB	
	HDMI RGB Setting	Normal	
		Enhanced	
	HDMI Auto Format	Max	
		Panel	
	Deep Color	Auto	
		Off	
	Audio Output	Bitstream	
		LPCM	
		Off	
	HDMI CEC	On	
		Off	
Playback	Player Menu	Auto	Nederlands
		Deutsch	Polski
		English	Português
		Español	Русский
		Français	Svenska
		Italiano	
	Audio	Original	
		Bulgarian	Italian
		Chinese	Japanese
		Czech	Korean
		Danish	Norwegian
		Dutch	Polish
		English	Portuguese
		Finnish	Romanian
		French	Russian
		German	Slovak
		Greek	Spanish
		Hungarian	Swedish
		Icelandic	Turkish
		Irish	Other
	Subtitle	Off	
		Bulgarian	Italian
		Chinese	Japanese
		Czech	Korean
		Danish	Norwegian
		Dutch	Polish
		English	Portuguese
		Finnish	Romanian
		French	Russian
		German	Slovak
		Greek	Spanish
		Hungarian	Swedish
		Icelandic	Turkish
		Irish	Other

Category	Menus / Options		
Playback	Disc Menu	Bulgarian	Italian
		Chinese	Japanese
		Czech	Korean
		Danish	Norwegian
		Dutch	Polish
		English	Portuguese
		Finnish	Romanian
		French	Russian
		German	Slovak
		Greek	Spanish
		Hungarian	Swedish
		Icelandic	Turkish
		Irish	Other
	BD Rating Level	Off	
		Age Setting	
	DVD Rating Level	Off	4
		8	3
		7	2
		6	1
		5	
	Password Change		
	Angle Icon	On	
		Off	
	Panel Display	Auto	
		Bright	
		Dimmer	
Network	Network Connection	Start	
		Connection Test	
	Network Status		
Others	Quick Start Mode*	On	
		Off	
	Auto Power Off	On	
		Off	
	Power On Control	Enable	
		Disable	
	Product Info		
	Software Update	Network	
		USB	
		Disc	
	Initialise	Reset Settings	
		Reset Network Settings	
		(Unit) Erase Saved BD-ROM Data	
		(USB) Erase Saved BD-ROM Data	
		Format USB	

* When “Quick Start Mode” is set to “On”, power consumption during standby mode will increase.

11. SETUPS

11.1 Network Connection

[HOME] → "Settings" → "Network" → "Network Connection"

Set up network connection settings in order to use BD-Live™, or network update function.

■ Connection Test

After you enable a network connection or change the network settings, always perform the connection test to check if the connection is correctly made.

1. Use **[▲/▼/◄/►]** to select "Settings" in the home menu, then press **[ENTER]**.
2. Use **[▲/▼]** to select "Network", then press **[ENTER]**.
3. Use **[▲/▼]** to select "Network Connection", then press **[ENTER]**.
4. Use **[▲/▼]** to select "Connection Test", then press **[ENTER]**.
   - Connection test will start automatically and the test result will appear right after the connection test finishes.

   "Connecting..." : The test is in progress.
   "Pass" : Network connection succeeds.
   "Failed" : Network connection failed.
5. If the connection test passes, press **[ENTER]**.

Note

- If the connection test passes, you are ready to use BD-Live™, or network update function, using the Internet without making any additional settings.
- If the connection test fails, you may need to check your router settings and make sure the physical connection is secure. If you need the MAC address of this unit to complete your router settings you can view it on the "Network Status" screen (refer to page 39).
- When connecting this unit directly to a modem for the first time or connecting it to a modem which was previously connected to any other network device (e.g. a router, PC, etc.), you may have to power cycle the modem to reset the settings on the modem.

■ Auto

Select "Auto" to set the network setting automatically.

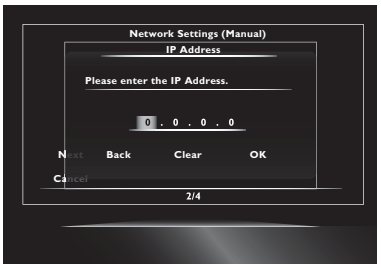
1. Follow steps 1 to 3 in "Connection Test" on page 40.
2. Use **[▲/▼]** to select "Start", then press **[ENTER]**.
3. Use **[▲/▼]** to select "Auto", then press **[ENTER]**.
   - The unit will start the connection test automatically and the test result will appear right after the test finishes.
4. The network setting is completed. Select "End".

■ Manual

In the following cases, select "Manual" to set each setting as necessary.

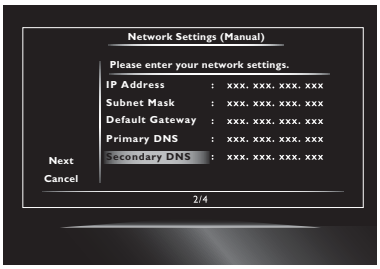
- When connection test failed with the setting of "Auto".
- When instructed by your Internet service provider to make specific settings in accordance with your network environment.

1. Follow steps 1 to 2 in "Auto" on page 40.
2. Use **[▲/▼]** to select "Manual", then press **[ENTER]**.
3. Use **[▲/▼]** to select "IP Address", then press **[ENTER]**.
4. IP address setting screen will appear. Enter IP address with cursor buttons and number buttons.

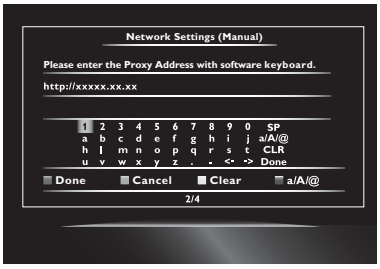


   - Enter the IP address after checking the specifications of your router.
   - If the IP address is unknown, check the IP address of other devices. (e.g. PC connected via LAN cable) and assign a different number from those of other devices.
5. Use **[▲/▼/◄/►]** to select "OK", then press **[ENTER]**.

6. Select “Subnet Mask”, “Default Gateway”, “Primary DNS” and “Secondary DNS” in turn, and enter each address number with cursor buttons and number buttons, then press **[ENTER]**.
   - Enter the DNS addresses provided by your Internet provider.
   - If the DNS address is unknown, check the DNS address of other devices (e.g. PC connected via LAN cable) and assign the same DNS address.


Network Settings (Manual)
Please enter your network settings.
IP Address : xxx. xxx. xxx. xxx
Subnet Mask : xxx. xxx. xxx. xxx
Default Gateway : xxx. xxx. xxx. xxx
Primary DNS : xxx. xxx. xxx. xxx
Secondary DNS : xxx. xxx. xxx. xxx
Next
Cancel
2/4

7. Use **[▲/▼/◄/►]** to select “OK”, then press **[ENTER]**.
8. Use **[▲/▼/◄/►]** to select “Next”, then press **[ENTER]**.
9. Use **[▲/▼]** to select “Yes” or “No” for proxy server, then press **[ENTER]**.
   - If you use proxy server, select “Yes” to go to the next step.
   - If you do not use proxy server, select “No” to go to step 13.
10. Proxy address setting screen will appear. Enter proxy address with cursor buttons, number buttons and colour key.


Network Settings (Manual)
Please enter the Proxy Address with software keyboard.
http://xxxxx.xx.xx
1 2 3 4 5 6 7 8 9 0 SP
a b c d e f g h i j a/A/@
h l m n o p q r s t CLR
u v w x y z . - <- -> Done
Done
Cancel
Clear
a/A/@
2/4

[▲/▼/◄/►] : Move the highlight.

[the Number buttons] : Enter number.

[ENTER] : Enter the highlighted number or letter.

[A]* : Set the entered number or letter.

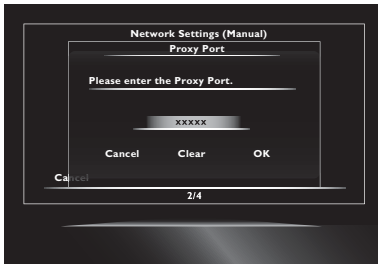
[B] : Exit the network setting.

[C] : Clear the entered number or letter.

[D]* : Switch between abc, ABC and @!?.

* These buttons can be used in other network settings.

11. Press **[A]** to go to the proxy port setting screen. Enter proxy port number with number buttons.



12. Use **[▲/▼/◄/►]** to select “OK”, then press **[ENTER]**.
13. Connection speed setting screen will appear. Use **[▲/▼]** to select the desired setting, then press **[ENTER]**. (The default setting is “Auto”.)
14. BD-Live™ setting screen will appear. Use **[▲/▼]** to select the desired setting, then press **[ENTER]**. (The default setting is “Allow”.)

“Allow” : Internet access is permitted for all BD-Live™ contents.

“Limited Allow” : Internet access is permitted only for BD-Live™ contents which have content owner certificates. Internet access without the certificates is prohibited.

“Prohibit” : Internet access is prohibited for all BD-Live™ contents.

15. Connection test confirmation screen will appear. Select “Yes” to start the connection test and the test result will appear right after the connection test finishes.
16. Select “End” to complete the settings.

Note for "IP Address", "Subnet Mask", "Default Gateway", "Primary DNS" and "Secondary DNS"

- The range of input numbers is between 0 and 255.
- If you enter a number larger than 255, the number will automatically be 255.
- When you enter a wrong number, select "Clear" to clear. (The number will be back to "0".)
- If you want to enter a 1 or 2-digit number in one cell, press **[▶]** to move on to the next cell.

Note for "Proxy Address" and "Proxy Port"

- The range of input numbers for the port number is between 0 and 65535. (If you enter a number larger than 65535, it will be regarded as 65535.)
- For proxy port, certain ports might be closed, blocked or unusable depending on your network environment.
- Choose a connection speed in accordance with your network environment.
- When the settings are changed, the network connection may be disabled depending on the device.

11.2 HDMI CEC

[HOME ⌂] → "Settings" → "HDMI" → "HDMI CEC"

HDMI CEC allows integrated system control over HDMI and is part of the HDMI standard. This function may not work properly depending on the device connected to the unit. When "HDMI CEC" setting is set to "On", functions listed below will be available.

■ One Touch Play

HDMI CEC operations are performed using remote control buttons. The TV will automatically be turned on and switched to the appropriate input source signal.

Buttons for one touch play:

– **[▶ (play)]**, **[⏮ (skip)]**, **[⏭ (skip)]**, **[the Number buttons]**, **[HOME ⌂]**, or **[DISPLAY]**
– **[TOP MENU]** or **[POP UP MENU / MENU]** (when a disc is inserted in the unit)

■ One Touch Standby

When you press and hold **[⏻ (on/standby)]** for 2 seconds, it will turn off the power to the TV first and then turn off the power to this unit.

When the connected HDMI CEC compatible display device is turned off first, this unit will be turned off subsequently.

■ System Information

Get & Set Menu Language

The unit recognises the OSD language set on the TV and automatically sets the same language as the player menu language (OSD menu language) for this unit. Refer to the "Player Menu" on page 38 for available languages.

- This feature is available only when "Auto" is selected in the "Player Menu" section in the setup menu.

Note

- HDMI CEC function is only available for HDMI OUT MAIN jack.

11.3 HDMI Output

[HOME ⌂] → "Settings" → "HDMI" → "HDMI Output"

You can set the video and audio output settings from HDMI OUT MAIN and SUB jacks.

"Main"

Outputs both of video and audio signals from HDMI OUT MAIN jack only.

"Dual (Main and Sub)"

Outputs video and audio signals from both of HDMI OUT MAIN and HDMI OUT SUB jacks.

"AV Split (Main:V, Sub:A)"

Outputs video signals from HDMI OUT MAIN jack and audio signals from HDMI OUT SUB jack.

Note

- To enable "HDMI Output", it is necessary that both HDMI OUT MAIN and HDMI OUT SUB jacks are connected with other HDMI devices and this unit should obtain EDID (Extended Display Identification Data).
- When "HDMI Output" is set to "Main", there will be no output from the HDMI OUT SUB jack.
- HDMI video resolution will normally be as selected in "Video Resolution" except when "HDMI Output" is set to "Dual (Main and Sub)" and "Video Resolution" is set to "Source Direct" or "Auto". When the unit is set to these settings video and audio from HDMI OUT MAIN and SUB jacks will be the same by EDID.
- When playing 3D contents with the unit set to "AV Split (Main:V, Sub:A)", a compatible display device and AV receiver/amplifier must be connected to the unit. Without a compatible device audio output will not occur.
- When set to "HDMI Output", unplugging the HDMI OUT MAIN or HDMI OUT SUB jack will clear settings.
- Only remove HDMI cables when this unit is in standby mode. Do not unplug cables when outputting video and audio signals from HDMI OUT MAIN and SUB jacks.
- The video output from HDMI OUT SUB jack and the video output which "HDMI Output" is set to "Dual (Main and Sub)" are not THX certified.

11.4 Video Resolution

[HOME ⌂] → "Settings" → "HDMI" → "Video Resolution"

Set the resolution of the video signal being output from the HDMI OUT jack.

You can select the desired "Video Resolution" among the settings listed below:
"Auto", "480i/576i", "480p/576p", "720p", "1080i", "1080p", "1080p/24", "Source Direct".

Actual Output Resolution by Media:

<table>
<tr><th rowspan="2">Setting in the "Video Resolution"</th><th colspan="5">Source</th></tr>
<tr><th>480i/60
576i/60</th><th>720p/60</th><th>1080i/60</th><th>720p/24</th><th>1080p/24</th></tr>
<tr><td>480i/576i</td><td colspan="5">480i/60
576i/60</td></tr>
<tr><td>480p/576p</td><td colspan="5">480p/60
576p/60</td></tr>
<tr><td>720p</td><td colspan="5">720p/60</td></tr>
<tr><td>1080i</td><td colspan="5">1080i/60</td></tr>
<tr><td>1080p</td><td colspan="5">1080p/60</td></tr>
<tr><td>1080p/24</td><td colspan="4">1080p/60</td><td>1080p/24</td></tr>
<tr><td>Source Direct</td><td colspan="5">HDMI video resolution will be set to the recorded resolution of a playback media.</td></tr>
<tr><td>Auto</td><td colspan="5">The highest or recommended resolution supported by your display device will be in effect automatically. "Auto" is affected by the "HDMI Auto Format" setting.</td></tr>
</table>

The table below describes the available output resolution when "Video Resolution" is set to "Source Direct".

Media	Source					
	480i/576i	480p/576p	720p	1080i	1080p	1080p24
BD-video	O	O	O	O	O	O
AVCHD	O	O	O	O	O	–
DVD-video	O	–	–	–	–	–
JPEG	–	O	O	–	O	–

O : available – : not exist

- Composite video output (VIDEO) jack can only output 480i/576i.
- For AVCHD, outputting the video in 24 frames per second (1080p/24) is not available.
- Even if "Video Resolution" is set to "Source Direct", HDMI video resolution will be changed when your TV is not compatible with the video resolution of a disc material.

Note

- You can select "Source Direct" or "Auto" by pressing **[SOURCE DIRECT]** on the front panel.
- You can also change the resolution of the video signal being output from the HDMI OUT jack by pressing **[RESOLUTION]** repeatedly.
- Pressing **[RESOLUTION]** does not work when HDMI cable is not connected, or when no video signal is being output from the HDMI OUT jack.
- Pressing **[RESOLUTION]** does not work during the playback of a BD-video or AVCHD.
- The selected resolution must also be supported by your display device.
- If your TV and the unit is connected by a DVI cable and if you select "Auto" or "Source Direct", "480p/576p" will be automatically in effect.
- Even if "Video Resolution" is set to "1080p/24", for a Blu-ray Disc™ that is not recorded in 1080p/24 or for DVD, the video resolution supported by the disc and the display device will be output instead of 1080p/24.
- Refer also to your TV's manual.
- When the HDMI OUT jack is outputting the video in 1080p/24 or 3D, picture will not be output from the VIDEO OUTPUT jacks.
- Do not remove HDMI cable during playing the video in 1080p/24 or 3D. Video signals will not be output if you replace the connection to a device which is not compatible with 1080p/24 or 3D contents.
- When connected to an HDCP incompatible display device, the picture will not be displayed properly.
- The audio signals from the HDMI OUT jack (including the sampling frequency, the number of channels and bit length) may be limited by the connected device.
- Among the display device(s) that support HDMI, some do not support audio output (for example, projectors). While connected to a device such as a projector, audio will not be output from the HDMI OUT jack.
- When this unit's HDMI OUT jack is connected to a DVI-D compatible display device(s) (HDCP compatible) with an HDMI-DVI converter cable, the signals are output in digital RGB.
- When you make a selection, the TV monitor temporarily goes blank and then comes back again. If it does not come back, press **[RESOLUTION]** repeatedly to change the resolution or touch and hold **[► (play)]** on the front panel for 5 seconds to change the setting back to its default.
- When playing back a Frame Sequential 3D Disc, video resolution of output picture will depend on contents on the disc. ("Video Resolution" setting is not applicable for Frame Sequential 3D Discs.)

Copyright protection system

To play back the digital video images of a BD-video or DVD-video via an HDMI connection, it is necessary that both the player and the display device (or an AV receiver / amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your display device (or an AV receiver / amplifier) for more information.

11.5 Parental

Rating's control allows you to set a limit, which prevents your children from viewing inappropriate materials. Playback will be stopped if the rating's exceed the level you set, and it will require you to enter a password before playing back the disc.

1. Use **[the Number buttons]** to enter your 4-digit password.
   For first time use:
   Use **[the Number buttons]** to enter any 4-digit number (except for 4737). That number will be used as the recover password. Record your password, in case you might forget it.
   - If you forget the password, enter **[4]**, **[7]**, **[3]**, **[7]**. The password will be cleared and rating level will be set to "Off".
   - When you input the password, select "Clear" to clear the number, then re-enter the password.

■ **BD Rating Level**

[HOME ⌂] → "Settings" → "Playback" → "BD Rating Level"

1. Use **[▲/▼/◄/►]** to select "Settings" in the home menu, then press **[ENTER]**.
2. Use **[▲/▼]** to select "Playback", then press **[ENTER]**.
3. Use **[▲/▼]** to select "BD Rating Level", then press **[ENTER]**.
4. Use **[the Number buttons]** to enter your 4-digit password.
5. Use **[▲/▼]** to select your desired option, then press **[ENTER]**.
   "Off" : To release the limitation.
   "Age Setting" : To set the age limitation.
   - After selecting "Age Setting", use **[the Number buttons]** to enter the age.
     (e.g., For age 6, enter **[6]** + **[ENTER]**.
     For age 15, enter **[1]**, **[5]** + **[ENTER]**.)
6. Press **[HOME ⌂]** to exit.

■ DVD Rating Level

[HOME ⌂] → "Settings" → "Playback" → "DVD Rating Level"

1. Use **[▲/▼/◄/►]** to select "Settings" in the home menu, then press **[ENTER].**
2. Use **[▲/▼]** to select "Playback", then press **[ENTER]**.
3. Use **[▲/▼]** to select "DVD Rating Level", then press **[ENTER]**.
4. Use **[the Number buttons]** to enter your 4-digit password.
5. Use **[▲/▼]** to select your desired level, then press **[ENTER]**.
6. Press **[HOME ⌂]** to exit.

RATING EXPLANATION		
Off	:	Parental Control is inactive; all discs can be played back.
8	:	DVD software of any grades (adult / general / children) can be played back.
7	:	No one under 17.
6	:	Restricted; under 17.
5	:	Parental guidance recommended.
4	:	Unsuitable for children under 13.
3	:	Parental guidance suggested.
2	:	General audience.
1	:	Suitable for children.

■ Password Change

[HOME ⌂] → "Settings" → "Playback" → "Password Change"

1. Use **[▲/▼/◄/►]** to select "Settings" in the home menu, then press **[ENTER]**.
2. Use **[▲/▼]** to select "Playback", then press **[ENTER]**.
3. Use **[▲/▼]** to select "Password Change", then press **[ENTER]**.
4. Use **[the Number buttons]** to enter your 4-digit password.
5. Use **[the Number buttons]** to enter a new 4-digit password.
6. Use **[the Number buttons]** to retype the same new 4-digit password.
7. Press **[HOME ⌂]** to exit.

To cancel parental lock temporarily

Some discs allow you to cancel the parental lock temporarily. With those discs, the message below will appear when you try to play them back.

"Enter current password."

Follow the instruction which appears on the TV screen to cancel the parental lock. After entering the password, rating level appears. Select desired rating level, then press **[ENTER]**.

11.6 Software Update

[HOME ⌂] → "Settings" → "Others" → "Software Update"

This unit lets you update the software yourself using a software update disc or USB flash drive. To update the software, you must first download the latest version software to a PC. Then write the update to a disc or USB flash drive, then execute "Software Update".

■ Disc / USB Update

You can update the software by using a disc or USB flash drive.

Prepare a software update disc or USB flash drive:

Access www.onkyo.com, and download the latest version software to a blank disc or a blank USB flash drive using a PC by following the directions described on the website.

- Use a blank disc or a blank USB flash drive and download one software per disc and USB flash drive.
- For more details on how to download the software, please refer to the website.

1. Use **[▲/▼/◄/►]** to select "Settings" in the home menu, then press **[ENTER]**.
2. Use **[▲/▼]** to select "Others", then press **[ENTER]**.
3. Use **[▲/▼]** to select "Software Update", then press **[ENTER]**.
4. Use **[▲/▼]** to select "Disc" or "USB", then press **[ENTER]**.
5. Use **[◄/►]** to select "Yes", then press **[ENTER]**.
6. Insert the disc or connect the USB flash drive for software update.
7. After loading disc or USB flash drive, confirmation message will appear. Select "Yes" and press **[ENTER]** to start updating.
   - It may take a while to complete the updating.
8. After the update finishes, this unit will restart. Remove the disc or USB flash drive from the unit.

Caution

- Please do not unplug the AC power cord while executing the "Disc / USB Update".

Note

- All settings will remain the same even if you update the software version.

■ Network Update

You can update the software by connecting the unit to the Internet.

1. Follow steps 1 to 3 in "Disc / USB Update" on page 46.
2. Use **[▲/▼]** to select "Network", then press **[ENTER]**.
3. Use **[◄/►]** to select "Yes", then press **[ENTER]**.
   - This unit will then start checking for the latest software version.
4. Confirmation message will appear. Select "Yes", then press **[ENTER]**.
   - The unit will start downloading the latest software version.
5. When the download completes, confirmation message will appear. Press **[ENTER]**.
   - The unit will start updating the software version.
   - It may take a while to complete the updating.
6. After updating finishes, this unit will restart automatically.

Caution

- Please do not unplug the AC power cord or LAN cable while executing the "Network".

Note

- In order to update the software via the Internet, you must connect the unit to the Internet and set up necessary settings.
- For the network connection, refer to "Connection to the Network" on page 21.
- For the network setup, refer to "Network Connection" on page 40.
- All settings will remain the same even if you update the software version.

11.7 Initialise

[HOME ⌂] → "Settings" → "Others" → "Initialise"

Menus to reset player settings, format USB flash drive, local storage and clear network settings.

1. Use **[▲/▼/◄/►]** to select "Settings" in the home menu, then press **[ENTER]**.
2. Use **[▲/▼]** to select "Others", then press **[ENTER]**.
3. Use **[▲/▼]** to select "Initialise", then press **[ENTER]**.
4. Use **[▲/▼]** to select the desired setting, then press **[ENTER]**.

   "Reset Settings":
   All the settings except for the parental lock and network settings will be reset to default.

   "Reset Network Settings":
   Resets the network setting to the default.

   "(Unit) Erase Saved BD-ROM Data":
   Clears the data saved for the BD-ROM contents, such as BD-ROM game scores, on this player.

   "(USB) Erase Saved BD-ROM Data" (Available only when a USB flash drive is connected.):
   Clears the supplemental data for the BD-ROM playback, such as subtitle data, from the USB flash drive.

   "Format USB" (Available only when a USB flash drive is connected):
   Initialise the USB flash drive.
5. Use **[◄/►]** to select "Yes", then press **[ENTER]**.
6. Confirmation message will appear. Press **[ENTER]** to complete the setting.
7. Press **[HOME ⌂]** to exit.

Caution

- Do not remove the USB flash drive while executing the "Format USB" or "(USB) Erase Saved BD-ROM Data". It will damage the drive.

Note

- "Format USB" or "(USB) Erase Saved BD-ROM Data" is not available when a Blu-ray Disc™ is in the unit.

12. TROUBLESHOOTING

Problem	Tip
No power.	Check if the AC cord is properly connected.
	Unplug the AC cord once, and wait for 5-10 seconds and then plug it in again.
No sound or picture.	Check if the connected TV is turned on.
	Check if the connections are made securely and correctly.
	Due to the current Copyright Protection System, Pictures may not be Output when a Video cable is connected. To solve this connect this unit directly to the TV with an HDMI cable.
	Check whether the connected TV or other device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.)
	Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of the other connected device.
	Press and hold **[► (play)]** on the front panel for 5 seconds to change the setting back to its default.
No reaction to the remote control.	Connect the unit to the power outlet.
	Point the remote control at the unit.
	Insert the batteries with the correct polarity.
	Insert new batteries in the remote control.
No audio / video signal on the display device via HDMI cable.	If the unit is connected to an unauthorised display device with an HDMI cable, the audio / video signal may not be output.
	Perform an HDMI cable hotplug, wherein you disconnect the HDMI cable from the TV and this unit and then reconnect it to both the devices while they are powered on.
	Ensure that your HDMI cable is certified.
	When "HDMI Output" is set to "AV Split (Main:V, Sub:A)", the video signal is output from HDMI OUT MAIN jack and the audio signal is output from HDMI OUT SUB jack.
No high-definition video signal on the TV screen.	Does the disc contain high-definition video? High-definition video is not available when the disc does not contain it.
	Does the TV support high-definition video? High-definition video is not available when the TV does not support it.
No 3D video on the TV screen.	Check if your TV is 3D capable.
	Use a 3D compatible HDMI cable to connect the 3D capable TV.
	Set "3D Output" to "Auto (XX)". (Refer to page 38.)
	Wear 3D glasses and make sure they are switched on and in sync with your TV.
	Check the battery levels of your glasses.
	Refer to your 3D TV's user manual for more information.
No audio signal from the loudspeakers of the TV screen.	Assign the audio input of the TV to the corresponding video input.
	Ensure that the TV's speakers are turned on in the TV menu.
No audio signal from the loudspeakers of the audio system.	Turn on the audio system.
	Set the audio system to the correct external audio input.
	Increase the volume level of the audio system.
Distorted picture.	Sometimes a small amount of picture distortion may appear. This is not a malfunction.
	Connect this unit directly to the TV. If the audio / video cables are connected to a VCR, pictures may be distorted due to the VCR copyright protection system.
Completely distorted picture or black / white picture with Blu-ray Disc™ / DVD.	Make sure the disc is Region compatible or otherwise compatible with this unit.
No sound or distorted sound.	Adjust the volume.
	Check if speakers are connected correctly.
	Check the HDMI connections.
	Check the settings in "Audio Out" menu.

Problem	Tip
Picture freezes momentarily during playback.	Check the disc for fingerprints / scratches and clean with a soft cloth wiping from centre to outer edge.
	Clean the disc.
Cannot play back a disc.	Make sure that the product supports the disc.
	Check the region code of the disc. This unit supports the following region codes. - Blu-ray Disc™ : "B" - DVD : "ALL" or "2"
	Clean the disc.
USB flash drive cannot be read.	The format of the drive is not accepted by this unit or the drive is not compatible.
Cannot play back JPEG files from a disc.	Make sure that the disc was recorded in the UDF, ISO9660 or JOLIET format.
Cannot play back MP3 files from a disc.	Make sure that the disc was recorded in the UDF, ISO9660 or JOLIET format.
	Make sure that the bit rate of the MP3 files is between 112 and 320 kbps.
	Make sure that the sample rate of the MP3 files is 32 kHz, 44.1 kHz or 48 kHz.
Cannot play back WMA files from a disc.	Make sure that the sample rate of the WMA files is 44.1 kHz or 48 kHz.
No return to start-up screen when disc is removed.	Reset this unit by turning it off for 30 seconds, then on again.
⃠ in the upper right hand corner of the TV screen.	The operation is not possible.
Buttons do not work or the unit stops responding.	To completely reset the unit, press and hold **[⏻ ON/STANDBY]** on the front panel for 10 seconds to shut down the unit or unplug the AC cord from the AC outlet for 5-10 seconds.
The unit does not respond to some operating commands during playback.	Operations may not be permitted by the disc. Refer to the instructions of the disc.
The unit cannot read Blu-ray Disc™ / DVD/ CD.	Condensation? (Let sit 1 or 2 hours)
	Check if the disc is compatible with this unit. (Refer to page 23.)
	Wipe dirt off the disc or replace the disc.
Angle does not switch.	The angle cannot be switched for Blu-ray Disc™ / DVD which do not contain multiple angles. In some cases multiple angles are only recorded for specific scenes.
Playback does not start when the title is selected.	Check setting of "BD Rating Level" or "DVD Rating Level". (Refer to page 44.)
The password for rating level has been forgotten.	Enter the default password "4737", then your forgotten password will be cleared.
Cannot find a JPEG file.	Make sure that the selected group (folder) does not contain more than 9,999 files for Blu-ray Disc™ / DVD / USB flash drive, and 999 files for CD.
	Make sure that the file extension is .jpg, .JPG, .jpeg or .JPEG.
Cannot find an MP3 and WMA file.	Make sure that the selected folder does not contain more than 9,999 files for Blu-ray Disc™ / DVD / USB flash drive, and 999 files for CD.
	Make sure that the file extension is .mp3 or .MP3 for MP3, and .wma or .WMA for Windows Media™ Audio.
Error message appears when I select "Auto" in the "Player Menu".	Make sure that the unit is connected to an HDMI CEC compatible TV and the "HDMI CEC" is set to "On".
	This error message may appear when your TV's OSD language is not supported by this unit.

Problem	Tip
Cannot play back AVCHD file.	This unit cannot play back standalone AVCHD files (*.m2ts, *.mts or *.m2t) written to a DVD or copied to an SD Card. The DVD containing AVCHD files must have a proper file and folder structure meeting AVCHD format specifications. Please use AVCHD compliant device / software to burn or copy AVCHD files to DVD. (Please refer to user manuals of the device / software for more information.)
Cannot connect to the network.	Check if the network connection is properly made.
	Turn on the modem or router.
	Check the network settings.
	Check if the router and/or modem is correctly connected.
	Check the BD-Live™ setting in "Manual" setup on page 40.
	When connecting directly to a modem via a LAN cable, you might need to power cycle the modem to reset settings on the modem.
Cannot connect to the network while my PC is connected to the network.	Check the content of your Internet service contract to see if your Internet Service Provider prevents multiple terminals connecting at the same time.
The capacity of the USB flash drive decreased.	Data may be written to the USB flash drive when a BD-video that supports the virtual package is used and a USB flash drive is connected.
MPEG-2 video and audio on the USB flash drive cannot be played back.	MPEG-2 is noncompliant on this unit.
The contents of the USB flash drive cannot be read.	The USB flash drive is not compatible or the contents on the USB flash drive may be damaged.
	Turn off and then turn the unit on again.
Cannot use the BD-Live™ function or download of data does not perform properly.	Connect a USB flash drive before inserting the disc.
	Connect a USB flash drive with enough capacity (1 GB or more).
	Check if a USB flash drive is correctly connected.
Cannot play back BD-video (BD-ROM Profile 2.0).	Connect a USB flash drive (1 GB or more) which is formatted on this unit. Some discs with BD-Live™ function require memory when playing back the content.
	Do not remove the USB during playback.

Note

- Do not attempt to repair the Blu-ray Disc™ Player yourself. This may cause severe injury, irreparable damage to your Blu-ray Disc™ Player or void your warranty.
- Please have available your Blu-ray Disc™ Player model and serial number before contacting us. These numbers are available on the cabinet, as well as on the packaging.

13. GLOSSARY

Analogue Audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also "Digital Audio".

Aspect Ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the TV screen is almost square); widescreen models are 16:9 (the TV screen is almost twice as wide as its height).

AVCHD

AVCHD is a new format for high definition video camcorders which can record and play high-resolution HD images.

BD-Live™

BD-Live™ is a BD-video (BD-ROM version 2 Profile 2.0) which contains new functions (e.g. Internet connection), in addition to the BONUSVIEW™ function.

Blu-ray Disc™

Blu-ray Disc™ is a next generation optical video disc which is capable of storing much more data than a conventional DVD. The large capacity makes it possible to benefit from the features such as high-definition videos, multi-channel surround sounds, interactive menus and so on.

Chapter

Just as a book is split up into several chapters, a title on a BD-video or DVD-video is usually divided into chapters. See also "Title".

Cinavia™

Cinavia Notice

This product uses Cinavia technology to limit the use of unauthorized copies of some commercially-produced film and videos and their soundtracks. When a prohibited use of an unauthorized copy is detected, a message will be displayed and playback or copying will be interrupted. More information about Cinavia technology is provided at the Cinavia Online Consumer Information Center at http://www.cinavia.com. To request additional information about Cinavia by mail, send a postcard with your mailing address to: Cinavia Consumer Information Center, P.O. Box 86851, San Diego, CA,92138, USA.
This product incorporates proprietary technology under license from Verance Corporation and is protected by U.S. Patent 7,369,677 and other U.S. and worldwide patents issued and pending as well as copyright and trade secret protection for certain aspects of such technology. Cinavia is a trademark of Verance Corporation. Copyright 2004-2013 Verance Corporation. All rights reserved by Verance. Reverse engineering or disassembly is prohibited.

Component Video Output

Each signal of luminance (Y) and component (PB/CB, PR/CR) is independent to output so that you can experience picture colour as it is.
Also, due to compatibility with progressive video (480p/576p), you can experience higher-density picture than that in interlace (480i/576i).

Digital Audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analogue-to-digital converter, generating a stream of numbers. On playback, a digital-to-analogue converter generates an analogue signal based on these numbers. See also "Sampling Frequency" and "Analogue Audio".

DNS Server

A server which translates Internet domain names into IP addresses.

Dolby® Digital

The system to compress digital sound developed by Dolby Laboratories. It offers you sound of stereo (2ch) or multi-channel audio.

Dolby Digital Plus

Dolby Digital Plus is the next generation digital audio compression technology developed as an extension to Dolby Digital. Blu-ray Disc™ supports 7.1 multi-channel surround sound output.

Dolby TrueHD

Dolby TrueHD is a lossless coding technology developed for next generation optical discs. Blu-ray Disc™ supports 7.1 multi-channel surround sound output.

DTS® (Digital Theater System)

DTS® is a multi channel surround sound system. You can enjoy movie dynamic and realistic sound like movie theatre. DTS surround sound technologies were developed by DTS, Inc.

DTS-HD®

DTS-HD® is a lossless coding technology developed as an extension of the original DTS Coherent Acoustics format. Blu-ray Disc™ supports 7.1 multi-channel surround sound output.

Gateway

IP address of the electronic devices (such as router) which provide Internet access.

HDMI (High-Definition Multimedia Interface)

A digital interface between audio and video source. It can transmit component video, audio, and control signal with one cable connection.

Hub

A device used for connecting multiple device to the network.

IP Address

A set of numbers which are assigned to devices participating in a computer network.

JPEG (Joint Photographic Experts Group)

JPEG is a method of compressing still picture files. You can copy JPEG files on BD-RE/-R, DVD-RW/-R, CD-RW/-R, or USB flash drive from a computer and play back the files on this unit.

LAN (Local Area Network)

A group of computer networks covering a small area like a company, school or home.

Local Storage

A storage area of sub contents for playing virtual packages on BD-video.

MP3 (MPEG audio layer 3)

MP3 is a method of compressing files. You can copy MP3 files on BD-RE/-R, DVD-RW/-R, CD-RW/-R, or USB flash drive from the computer and play back the files on this unit.

PCM (Pulse Code Modulation)

The most common system of encoding digital audio, found on CD and DAT. Excellent quality, but requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital, DTS, and MPEG audio to PCM. See also “Digital Audio”.

Proxy Server

Proxy server is a server which acts as an intermediary between a workstation user and the Internet to ensure security.

Region Code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Router

A networking device which distinguishes the IP address assigned to each device and routing and forwarding information in the computer network.

Sampling Frequency

The rate which sound is measured by a specified interval to turn into digital audio data. The numbers of sampling in one second defines as sampling frequency. The higher the rate, the better the sound quality.

Subnet Mask

A mask which is used to determine what subnet an IP address belongs to.

Title

A collection of chapters on BD-video or DVD-video. See also “Chapter”.

Track

Audio CD uses tracks to divide up the content of a disc. The BD-video or DVD-video equivalent is called a chapter. See also “Chapter”.

Virtual Package

The function which copies data to other media (local storage) from the Internet and plays secondary video, secondary audio and subtitles at the same time. The method of the playback varies depending on discs.

Windows Media™ Audio

Windows Media™ Audio is the audio compressing technology developed by Microsoft. You can copy Windows Media™ Audio files on BD-RE/-R, DVD-RW/-R, CD-RW/-R, or USB flash drive from a computer and play them back on this unit.

x.v.Color

“x.v.Color” is a promotion name given to the products that have the capability to realise a wide colour space based on the xvYCC specifications and is a trademark of Sony Corporation.

14. LANGUAGE CODE LIST

Language	Code	Language	Code	Language	Code	Language	Code
A-B		French [FRE]	5264	Macedonian	5957	Siswat	6565
Abkhazian	4748	Frisian	5271	Malagasy	5953	Slovak [SLO]	6557
Afar	4747	Galician	5358	Malay	5965	Slovenian	6558
Afrikaans	4752	Georgian	5747	Malayalam	5958	Somali	6561
Albanian	6563	German [GER]	5051	Maltese	5966	Spanish [SPA]	5165
Amharic	4759	Greek [GRE]	5158	Maori	5955	Sundanese	6567
Arabic	4764	Greenlandic	5758	Marathi	5964	Swahili	6569
Armenian	5471	Guarani	5360	Moldavian	5961	Swedish [SWE]	6568
Assamese	4765	Gujarati	5367	Mongolian	5960	**T**	
Aymara	4771	Hausa	5447	Nauru	6047	Tagalog	6658
Azerbaijani	4772	Hebrew	5451	Nepali	6051	Tajik	6653
Bashkir	4847	Hindi	5455	Norwegian [NOR]	6061	Tamil	6647
Basque	5167	Hungarian [HUN]	5467	**O-R**		Tatar	6666
Bengali;Bangla	4860	**I-K**		Occitan	6149	Telugu	6651
Bhutani	5072	Icelandic [ICE]	5565	Oriya	6164	Thai	6654
Bihari	4854	Indonesian	5550	Oromo(Afan)	6159	Tibetan	4861
Bislama	4855	Interlingua	5547	Panjabi	6247	Tigrinya	6655
Breton	4864	Interlingue	5551	Pashto;Pushto	6265	Tonga	6661
Bulgarian [BUL]	4853	Inupiak	5557	Persian	5247	Tsonga	6665
Burmese	5971	Irish [IRI]	5347	Polish [POL]	6258	Turkish [TUR]	6664
Byelorussian	4851	Italian [ITA]	5566	Portuguese [POR]	6266	Turkmen	6657
C-E		Japanese [JPN]	5647	Quechua	6367	Twi	6669
Cambodian	5759	Javanese	5668	Rhaeto-Romance	6459	**U-Z**	
Catalan	4947	Kannada	5760	Romanian [RUM]	6461	Ukrainian	6757
Chinese [CHI]	7254	Kashmiri	5765	Russian [RUS]	6467	Urdu	6764
Corsican	4961	Kazakh	5757	**S**		Uzbek	6772
Croatian	5464	Kinyarwanda	6469	Samoan	6559	Vietnamese	6855
Czech [CZE]	4965	Kirghiz	5771	Sangho	6553	Volapuk	6861
Danish [DAN]	5047	Kirundi	6460	Sanskrit	6547	Welsh	4971
Dutch [DUT]	6058	Korean [KOR]	5761	Scots Gaelic	5350	Wolof	6961
English [ENG]	5160	Kurdish	5767	Serbian	6564	Xhosa	7054
Esperanto	5161	**L-N**		Serbo-Croatian	6554	Yiddish	7155
Estonian	5166	Laothian	5861	Sesotho	6566	Yoruba	7161
F-H		Latin	5847	Setswana	6660	Zulu	7267
Faroese	5261	Latvian;Lettish	5868	Shona	6560		
Fiji	5256	Lingala	5860	Sindhi	6550		
Finnish [FIN]	5255	Lithuanian	5866	Singhalese	6555		

Note

- If you choose a language that has a 3-letter-language code (written in bracket), the code will be displayed every time you change the subtitle language setting on page 34 or audio language setting on page 34. If you choose any other languages, "---" will be displayed instead.

15. SPECIFICATIONS

General	
Signal system	NTSC / PAL Colour
Power requirements	AC110-240 V, 50/60 Hz
Power consumption	21 W, standby: 0.3 W, standby(Power On Control): 3.5 W
Dimensions (width x height x depth)	435 x 104 x 315 mm
Weight	4.6 kg
Operating temperature	5 °C to 40 °C
Operating humidity	Less than 80 % (no condensation)

Audio	
BD Linear Audio	4 Hz–88 kHz (192 kHz)
DVD Linear Audio	4 Hz–44 kHz (96 kHz), 4 Hz–22 kHz (48 kHz)
Audio CD	4 Hz–20 kHz (44.1 kHz)
Signal to Noise Ratio	100 dB
Audio Dynamic Range	98 dB
THD (Total Harmonic Distortion)	0.005 % (1 kHz)

Terminals	
USB input	USB 2.0
TYPE A	Bus power current: MAX. 500 mA
Audio output (Analogue)	
RCA jack x 2	L/R: 2 Vrms (output impedance: more than 1 kΩ)
Video output	
RCA jack x 1	1Vp-p (75Ω)
Component video output	Y: 1 Vp-p (75 Ω)
RCA jack x 3	PB: 700 mVp-p (75 Ω)
	PR: 700 mVp-p (75 Ω)
Audio output (Digital)	
RCA jack x 1	500 mVp-p (75 Ω)
Optical jack x 1	Digital connector
HDMI output	
HDMI jack x 2	Video: 480i/576i, 480p/576p, 720p, 1080i, 1080p, 1080p24 / Audio
ETHERNET terminal	10BASE-T/100BASE-TX

Note

- The specifications and design of this product are subject to change without notice.

16. IMPORTANT HEALTH AND SAFETY INFORMATION FOR 3D TELEVISIONS

Read the following information before viewing 3D television images.

CAUTION NOTICE:

1. Ambient fluorescent lighting may cause a flickering effect and direct sunlight may adversely affect the operation of your 3D glasses.
2. DO NOT place your television near open stairwells, balconies or other objects as viewing in 3D images may cause disorientation for some viewers resulting in falls, tripping or walking into objects.
3. If you experience (1) altered vision; (2) lightheadedness; (3) dizziness; (4) involuntary movements such as eye or muscle twitching; (5) confusion; (6) nausea; (7) loss of awareness; (8) convulsions; (9) cramps; and/or (10) disorientation, immediately stop watching 3D images and consult your doctor.
4. Parents should regularly monitor their children concerning the above symptoms as children and teenagers may be more likely to experience these symptoms more frequently than adults. Watching 3D television is not recommended for children under the age of 6 as their visual system is not yet fully developed.
5. Prolonged viewing of 3D images might cause discomfort, dizziness, eye strain, headaches or disorientation.

WARNING NOTICE:

1. Some viewers may experience an epileptic seizure or stroke when exposed to certain flashing images or lights contained in certain television pictures or video games. If you or any of your family has a history of epilepsy or stroke, please consult your doctor before viewing 3D images.
2. DO NOT watch 3D television if you are pregnant, elderly, sleep-deprived, suffering from serious medical conditions, in poor physical condition or under the influence of alcohol.
3. Sitting too close to the screen for an extended period of time may damage your eyesight. The ideal distance should be at least three times the height of the TV screen and at the viewer's eyes level.
4. Wearing the 3D glasses for any reason other than viewing 3D television (as general spectacles, sunglasses, protective goggles, etc.) may physically harm you or weaken your eyesight.
5. If you experience any discomfort while viewing 3D images, stop and do not immediately engage in any potentially hazardous activity such as driving a car until your symptoms have disappeared. If your symptoms persist, do not resume watching 3D images without consulting your doctor.

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Asia, Oceania, Middle East, Africa
Please contact an Onkyo distributor referring to Onkyo SUPPORT site.
http://www.intl.onkyo.com/support/

The above-mentioned information is subject to change without prior notice.
Visit the Onkyo web site for the latest update.

BD-SP809(B)CUP2BP_BD-SP809(S)CUP2BP
ECEB0EH / ECEB2EH
2VMZ00100A★★★★

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